palmtop user

The magazine for handheld computers & communicators

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EDITORIAL

In December 2002, with no discernable announcement, HP discontinued its Jornada 700 series of Microsoft-powered handhelds.

What makes this announcement significant is that the Jornada 700 series was the last remaining handheld computer on the market to incorporate a good, old fashioned *keyboard*. That doesn't include over-sized sub-notebook computers, hybrid 'communicator' devices such as the Nokia 9200 series, or sub-miniature keyboards such as found on the Handspring Treo range. But, when it comes to dedicated PDAs with a physical keyboard that you can type on in the traditional sense, there is now nothing on the market. Nothing at all.

Although a touch typist of many years, I've recently become a big fan of 'virtual', on-screen keyboards. Although in most cases not as fast as a 'real' desktop keyboard, most handheld keyboards were far too small to touch type on anyway. Given that most keyboarded handhelds are bigger and bulkier than their keyboardless cousins (the flagship Jornada 728 weighed in at more than 500g/1.1lb), the overall compromise of a keyboardless PDA is far less than most keyboard devotees might imagine. Also, rather than being considered as standalone computers in their own right, as many early Psion palmtops were, modern Palm OS and Pocket PC devices offer quite seamless and reliable synchronization with a desktop PC, making it more appropriate to do a lot of your data entry at the PC end, where you have the benefit of a much larger screen and keyboard.

Nevertheless, only two years ago I would never have imagined or even believed that by the beginning 2003, the keyboarded PDA would have become effectively extinct.

So what does the future hold for PDA input methods? A complete voice input solution still appears to be some years away, so I wouldn't rule out the mainstream reappearance of the keyboard. But then again, I thought the Microwriter Agenda was a good idea, and I *never* would have believed that Palm's Graffiti input system would catch on.

Steve Clack - February 2003

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Printed by Century Litho

Handheld News

What's new in the world of handheld computing

P800 surfaces at last

As we went to press, the first Sony Ericsson P800s were beginning to ship. We've looked at the first units of this cutting edge tri-band Symbian OS 7.0 PDA/smartphone, but there appear to be some stability issues still to be addressed. We'll feature a full, in-depth review of the P800 in issue 4. A version for the Chinese market is also coming soon, the P802.

www.sonyericsson.com

The Tungsten W is coming

Most of the mystery surrounding Palm's upcoming Tungsten W is now cleared up. It will have a Handspring Treo-style keyboard, a 5-way navigator (as on the Tungsten T) and GPRS Class 10 data circuitry for high-speed, always-on Internet email and web browsing. The Tungsten W can be used as a regular GSM phone using a supplied hands-free headset. Its launch price in the USA is expected to be around $550.

www.palm.com

Dell weighs in

In a bid to undercut at least part of the Palm OS world, Dell has launched the $250 Axim X5 Basic Pocket PC in the USA, with 300MHz processor, 32MB of RAM and both CF and SD card slots. A faster version with 64MB of memory is also available. It is planned to roll out the Axim X5 in other world regions shortly. See the next issue for a full review.

www.dell.com

New iPAQs

Under the HP name, of course, two new iPAQ Pocket PCs are in the process of being released. The $300 lightweight (130g/4.6oz) h1910 has a 200MHz Intel XScale processor, 64MB RAM, an SD/MMC expansion slot and a bright transreflective colour screen. The h5450 is heavier at 206g (7.3oz), with all the above plus biometric fingerprint security, 802.11b wireless LAN and Bluetooth

capabilities built-in. We'll be reviewing both in the next issue.

www.hp.com

Clié NZ90 does everything

Never one content to sit on its laurels, and with price seemingly not an issue, Sony has announced yet another new flagship handheld, the Clié PEG-NZ90. Running Palm OS 5, it features a two-megapixel digital camera with built-in flash, video recording, auto-focus capabilities, manual exposure adjustment, digital zoom (2x), red-eye reduction and a self-timer function. On the computing side, there's Bluetooth, a Wi-Fi slot and removable Li-Ion battery, plus all the usual Sony flagship refinements like 480x320 screen and MP3 player/headphones. A special docking cradle has connectors for TV output and an attached printer. Expected retail price for the USA is around $800.

www.sonystyle.com

Games first

Nokia has announced the N-Gage, a 'game optimized device' running its Series 60 interface on top of Symbian OS. It includes a camera and Bluetooth support, but more details and availability are as yet unknown.

www.nokia.com

Pocket PC mediaphone

Hitachi has entered the Pocket PC arena with a bang, announcing 'The Multimedia Communicator' in the USA, to be available in the first half of this year. The unit sports a camera and built-in keyboard, though will currently work only on the Sprint PCS Network.

global.hitachi.com

...and now GPS is built-in too

Garmin has formally announced its groundbreaking GPS/Palm handheld hybrid. The iQue 3600 runs Palm OS 5 with an ARM processor, 32MB of memory, has a built-in GPS satellite navigation system with flip-up antenna, a speaker for voice-guidance commands and an MP3 player. It's not expected to be available before the summer, and will cost less than $600.

www.garmin.com

Photograph: Kent Johansson

Neonode startup

Swedish start-up Neonode has announced the N1, a revolutionary Windows CE-based smartphone, using a proprietary touch-screen interface. The initial version will be dual-band GSM/GPRS and will have a 76MHz ARM processor, 176x220 pixel screen and 16MB of memory. Unlike Nokia's slightly larger 7650, the N1 also has an SD/MMC card expansion slot. As with other Microsoft-powered handhelds, connection to a PC is via ActiveSync.

www.neonode.com

New keyboarded Nokia

The 6800 is another innovative smartphone from Nokia, with a flip-over QWERTY keyboard and a heavy emphasis on SMS text messaging and email. The 6800 is not a Series 60 communicator, unfortunately, so there will be no compatibility with existing Symbian software.

www.nokia.com

Ultra keyboard

Developed by Think Outside (and rebranded by Palm as the Ultra-Thin Keyboard), the Stowaway XT is the successor to the much-copied original Stowaway design. The $100 XT keyboard is a 2-piece folding design and only half the thickness of its predecessor. Unlike the original, it can be used unsupported on a lap.

store.palm.com

Sendo sues Microsoft

Following the abandonment of its Microsoft-powered smartphone, Sendo is suing Microsoft for "misappropriation of trade secrets, unfair competition, fraud and tortuous interference".

www.sendo.com

The dying days of Graffiti?

Palm's Graffiti gesture recognition system is being phased out following legal issues with Xerox. PalmSource has announced that it's replacing Graffiti with a variant of CIC's Jot character recognition system (now dubbed Graffiti 2) in future versions of Palm OS.

www.handspring.com
www.palmsource.com
www.cic.com

Psions still creeping out

Despite the official halt to Psion Series 5mx production a few months back, units are still creeping out of the woodwork, with a few companies announcing temporary stock of the Series 5mx, Series 7 and UK-spec Series 5mx Pros.

www.clove.co.uk
www.posltd.com

No more clamshells?

HP has quietly discontinued the Jornada 728, the last of its 'clamshell' Windows-powered palmtops (see editorial on page 3), with the remainder of the Jornada range to be phased out in favour of the iPAQ series during the course of this year. With the continuing gradual demise of Psion's palmtop range, there seems to be a gap in the market, currently filled only by Nokia's keyboarded 9200 series communicators. For a roundup of add-on keyboards for existing handhelds, see our feature in issue 1.

OPL goes Open Source

Symbian has announced that its perennially popular OPL programming language will become an Open Source project. The exact details are still being worked out, but one immediate aim is to port OPL to the Series 60 and UIQ/Symbian 7.0 devices and platforms.

On the subject of OPL, Symbian has at last officially released its OPL runtime for the Nokia 9200 range, opening the doors for increased numbers of homegrown freeware and shareware applications.

www.allaboutsymbian.com
www.symbian.com/developer/downloads/v6oplrun.html

Next generation wrist PDA

Following on from the rather weak original design (reviewed in issue 1), Fossil has officially licensed Palm OS, opening the door for the world's first Palm OS-powered watch. This next generation wrist PDA will be fully compatible with existing Palm OS applications.

www.fossil.com

Symbian goes 3G

Symbian licensee Fujitsu has completed development of a Symbian OS smartphone for NTT DoCoMo's FOMA 3G network. This is the first Symbian OS smartphone to be launched in Japan and is also the first Symbian OS 3G smartphone.

www.nttdocomo.com
www.symbian.com

XDA gets memory doubled

The specification of the O_2 XDA, reviewed in the last issue, has quietly been changed on the O_2 web site recently, with internal memory now at 64MB rather than the original 32MB, making the unit a more attractive proposition for power users. The original price of £300 (with contract) remains unchanged. The 32MB model no longer appears on the site, and there is currently no option to upgrade older 32MB units to the new specification.

www.o2.co.uk

Wi-Fi on SD

SyChip has announced the first SD Wi-Fi (802.11b) card, giving PDAs the possibility of full local network and Internet access. The SyChip 6060SD operates at up to 100 megabits per second.

www.sychip.com

3GB CompactFlash

Pretec Electronics has launched a range of Multi-Gigabyte CompactFlash (CF) cards, in sizes of 1.5, 2 and 3GB. The 3GB card is priced at $2,500.

www.pretec.com

Bluetooth GPS

Socket Communications has announced the Socket Bluetooth GPS Receiver, which will ship shortly with Socket's own MyNavigator in-car navigation software for Pocket PCs, for just over $500. The GPS also works with other Bluetooth-

equipped PDAs and smartphones. Maps are available for the USA and UK, with Europe coming shortly. The unit claims a battery life of around six hours from its internal lithium-ion rechargeable.

www.socketcom.com

AvantGo acquired

Sybase has bought out AvantGo for around $40 million. The popular My AvantGo service currently has more than seven million registered users. Apparently, the existing AvantGo service will continue uninterrupted.

avantgo.com

Large card Palm update

File Manager Update is a patch for the Palm m125, m500, m505, m515, m130, i705 and Tungsten W handhelds. It resolves a problem formatting high-density SD/MMC cards (128MB or greater).

www.palm.com/support/downloads/file_manager_update.html

Palm OS SHORTS

We take a brief overview of the latest software for your Palm OS handheld or communicator...

Back in the USA

Vindigo is back with a vengeance with version 2.0, at least it is if you're visiting the USA. On the surface it sounds a great idea, with a bang up-to-date hypertext guide to all that goes on in various cities, updated at each HotSync using the same technology as AvantGo. Simple line maps and walking instructions guide you in to your chosen bars, clubs, museums, restaurants, etc. The data's top-notch and all there, sorted by proximity to your current location, using a GPS feed or (more likely) just a manual selection of road/junction. You can even add your own item reviews, sending text back to Vindigo at HotSync time.

Vindigo 2—great news if you live in the USA

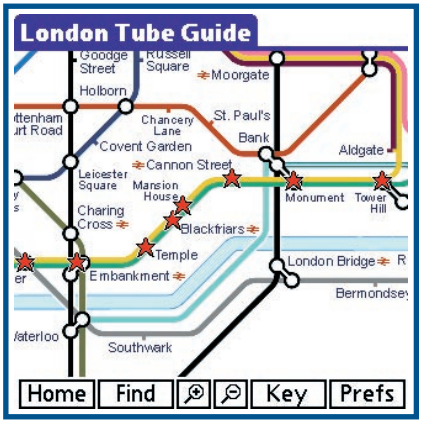
The US focus is a real pity though, with only London available outside North America and apparently no plans to add anything else for Europe. Also a pity, considering that each Vindigo subscription costs $25 a year, is that ads for loosely-related Palm OS products are peppered around Vindigo's interface. Worse, everything is presented in monochrome only. For Vindigo 2.0 to be rolled out without any colour support at all is a great disappointment.

www.vindigo.com

First Aid from your Palm

First Aid instruction is a perfect match for handheld computers, being always with you. **1st Aid** is a freeware guide, with categorised entries ranging from "Earthquakes" down to "Cuts, Scrapes and Puncture wounds" and on to trivia such as "Bumps and Bruises". Each entry has a handful of supplementary questions and topics, each neatly scrolling in the main interface and with a good bookmark system always on hand to note the

First Aid when you most need it, with 1st Aid



A useful tool for London travellers

entries you most often refer to. The only fly in the ointment is the overlong seven second startup time, during which delay your patient may start to doubt your claimed instant expertise.

www.acheishopping.com.br/villanova

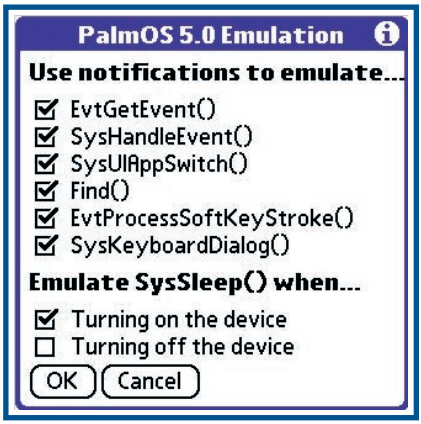
One Mornington Crescent

London Tube Guide is pretty much the ultimate London tube (subway) route planner. Of course, there's a scrollable (and zoomable) colour version of the standard London tube map, but the program's heart is in the route planning engine, with its knowledge of journey times between individual stations. When planning a complex route, it can juggle a longer physical journey with fewer stops against a shorter one with more changes, even allowing for the time needed to swap lines (up and down stairs, etc.) A built-in landmark database is a welcome extra, with the program detailing the nearest tube station to each. $15.

www.westering.com

The ultimate hacker

The best just got better, with TealPoint Software continuing to push back the boundaries of 'hack' plug-in technology. **TealMaster 2.0** ($10), quite apart from being the best and most configurable Hackmaster replacement for traditional Palm OS devices by some margin, has managed to emulate much of the typical 'hack' environment for the new



TealMaster helps hacks to run under OS 5

Palm OS 5. By trapping system events and keypresses, the new TealMaster manages to present them successfully to existing hacks, even though these will have been written for the older Dragonball-based versions of Palm OS. TealPoint Software maintains a growing compatibility list on its web site.

www.tealpoint.com

Timely changes

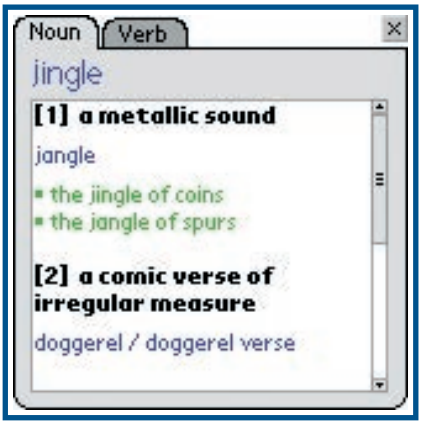
Do you travel internationally? As you change time zones, you'll either change your handheld's clock manually or have it set automatically by a third party utility. But what about all those entries in Date Book? "Lunch with Bill" at 1pm local time should obviously stay as it is, whereas "Telecon with Martin at Paris office" at 10am GMT needs adjusting for your Date Book's display. **TimeWarp** ($10) is a simple solution, sitting in the background and spotting clock changes of an hour or more. Entries matching a specified string (e.g. "Telecon") get altered in your Date Book database, with everything else being left alone. TimeWarp's application is limited slightly by only being able to specify a single matching string, but if you need more then you can simply use a prefix (e.g. "INT") for all entries that are fixed in international time.

www.slorevo.com

Ultimate word power

ProWord (£7.50) may 'just' be a dictionary, but it's pretty definitive. If you're going to install reference applications on your handheld then it's worth getting ones that are never stumped, and ProWord's 145,000 word lexicon should be up to any challenge. Considering the size of the word database (5.7MB, with an optional 2.6MB version if space is tight), the speed with which search strings are 'quick-matched' is quite impressive, even with the database loaded onto SD expansion card. For example, "Quixotic" took around eight

Manage your time zones with TimeWarp



ProWord, obscure words included...

seconds to input, match and display. Of course, with so many words on offer, there are quite a few for which even the term 'obscure' would be over-generous: "quodlibet", "paca" or "strekelia", anyone? Scrabble players and those interested in the English language will find tremendous depth.

www.proporta.com

Jack of all trades

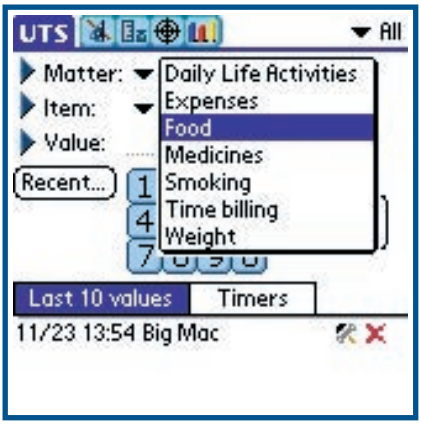
One thing computers are very good at is keeping track of sequences of numbers. Owning a handheld opens up all sorts of uses for tracking things recorded when out and about, and this is the focus of **Universal Tracking System (UTS)** ($15). An impressive built-in wizard helps you set up a database for the item(s) you're tracking, specifying units, labels and conversion factors if necessary. You then enter amounts for each item as and when recorded, with UTS tallying them up, providing daily summaries and regular charts. Typical uses might include diet tracking, money management or simply recording the number of alcoholic drinks you get through each week. There's even a timer mode, whereby UTS can keep track of time spent on specific activities.

www.utracksys.com

Counting the cost

GPRS wireless connections tend to be charged by the amount of data transferred, so if you'd rather not be kept in the dark about your monthly costs, **TrafficStat** ($10) can help, keeping a watching eye on every byte flowing into or out of your handheld's Internet connection. It works invisibly, even reawakening itself after a soft reset. TrafficStat is flexible, with custom billing cycles and reporting. It can also sum the bandwidth used by each of your Internet connections, for example totalling your dial-up use as well.

www.hexlet.com



UTS—a powerful and flexible tool

Monitor your GPRS costs with TrafficStat

Symbian SHORTS

A roundup of the latest software releases for your Nokia communicator or Psion handheld...

MP3 if you must

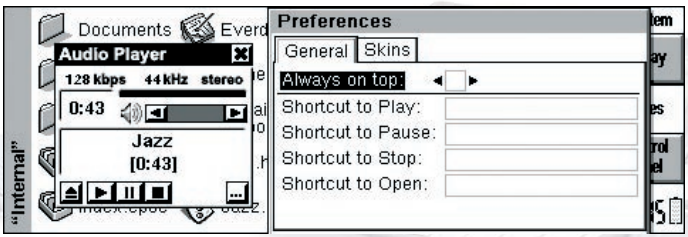
You have to be something of a masochist to try to play standard 128kbps stereo MP3 music files on the tinny Psion palmtop speaker. Firstly, most of the audio quality in your file is wasted by the speaker's physical limitations, and secondly you'll rue the fact that you're wasting memory, as standard EPOC sound files would be only half the size and sound no different. And the alternative of downsampling each of your MP3s to a more suitable data rate is awkward and time-consuming. However, it may still be handy to have MP3 playback on your Psion, for those occasions when a friend beams you their favourite track or when swapping CF disks with your standalone MP3 player, and this is where **Audio Player** (€12) steps in.

Running in a small foreground window on all modern Psion palmtops, Audio Player supports data rates of up to 192kbps. With the low processor power available, it's not surprising that playback drops out occasionally when opening up other applications or doing something processor-intensive, but Audio Player chugs along enough to keep you supplied with pleasant background sounds.

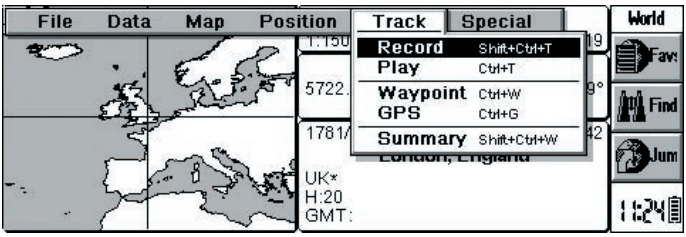
www.vikinggames.hu

All purpose mapping

vwAtlas (€10) is a mapping program with a difference. Apart from an outline map of the world's continents (in reasonable detail), there's little supplied data other than selected cities, similar to the built-in Time/World application. Where it scores is in its integration with

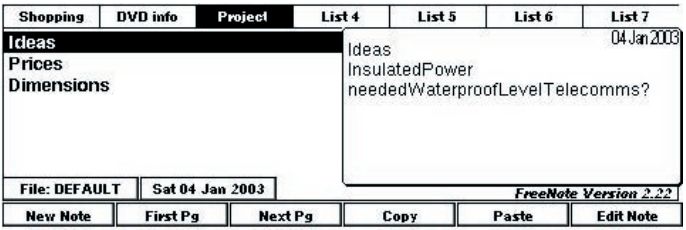


MP3 on any modern Psion, courtesy of Audio Player



Mapping and GPS functions in vwAtlas

Notes every which way you look—FreeNote



an attached NMEA-compatible GPS (Global Positioning System, see page 61), with support for waypoints and tracks, recording and playing back the latter on the Psion itself. vwAtlas also scores with its support for coordinate systems, Great Circles, and so on. You can even create your own maps, perhaps of local areas, ready for planning and playback of scout or club GPS activities.

pi.physi.uni-heidelberg.de/~vwalter

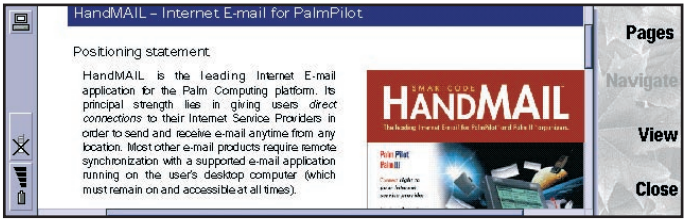
Born free

Jotter is all very well as a general note-taker on your Psion, but each file is limited to a single list of notes. The freeware **FreeNote** is a much more ambitious, if slightly clunky, third party replacement, with up to seven tabbed lists of notes in each file and as many files as you care to create. FreeNote's interface is rather immature in places in this, v2.22: for example, tapping on an entry's title or contents does absolutely nothing—you have to tap on 'Edit Note' or use the menu command. The application is a good idea though, and a valid alternative to Jotter or to stacked To-do lists in Agenda.

www.philipbister.ukonline.co.uk

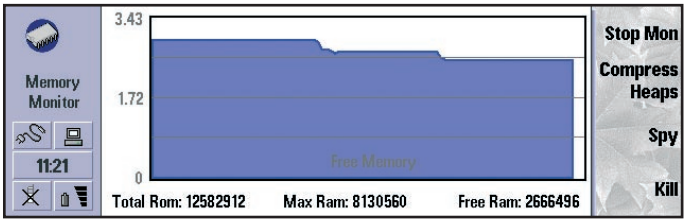
PDF, Adobe style

Adobe has been gradually rolling out official Acrobat (PDF) reader applications for almost every computer platform in existence, and now it's Symbian's turn, with this Nokia 9200 series version. **Acrobat Reader 1.0** is a professionally finished application, and for many documents works even better than the existing shareware PDF+ client, with more readable fonts and more intuitive operation. As with the native Nokia web browser, a pointer can be toggled on or off for detailed selection purposes and text can be copied across to other Symbian applications. Document magnification is excellent, with absolute control over



Acrobat PDF files, the Adobe way

Memory Monitor keeps a close watch on where your 9210's precious RAM is being used



zoom levels and a few handy presets, and there's a healthy and sensible set of Preferences, including the setting of a default zoom factor. Acrobat Reader is free, and only its interminably slow Find function might tempt users to fork out for PDF+ instead.

www.adobe.com/products/acrobat/readerforsymbian.html

Ultimate memory tool

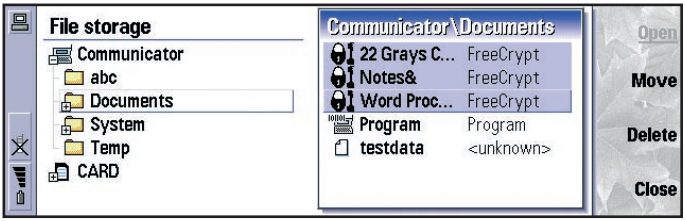
The freeware **Memory Monitor** is a small but powerful utility for the Nokia 9200 series communicators. As the name suggests, its prime purpose is to help you manage the Nokia's 8MB of execution memory, which is otherwise prone to running out just at a crucial moment. Although its central feature is a real-time graph of free memory, a command button gives you one-keypress optimization of memory, tidying up after previously-run applications.

If you're feeling brave enough, there's also a 'Spy' feature, listing every operating system and third party process currently loaded in the Nokia 9210's execution memory. You can then choose to view memory usage for just one of these if you wish, or kill off any rogues that shouldn't be there.

my-symbian.com

Secure all the way

There are several dedicated secure databases for the Symbian platform, based around forms for PIN numbers, passwords, bank details, and so on. But what if you want to keep something else from prying eyes, perhaps a word processor document, spreadsheet or PDF file? In fact, any type of file can be securely protected by yet another freeware tool for the 9210, **FreeCrypt**. Ported from the original Psion version, this works in much the same way. Having encrypted (using RC4 encoding) a specific file or document with a password of your choice, it then appears in File manager with the FreeCrypt padlock



A selection of FreeCrypted documents show up in File manager

icon. Opening this up kicks off FreeCrypt, which asks for the correct password and then decrypts the file and launches the associated application. Once you've finished viewing or editing the file, it's then automatically re-encrypted.

The system's simple and works remarkably well. The only real limitation is being restricted to opening up just one encrypted document at a time, although others can be manually decrypted beforehand and worked on in parallel. Manual decryption is also needed for documents belonging to applications which aren't as well-behaved as the built-in Symbian ones.

FreeCrypt is a genuinely useful utility for all 9210 owners, and deserves to be widely used.

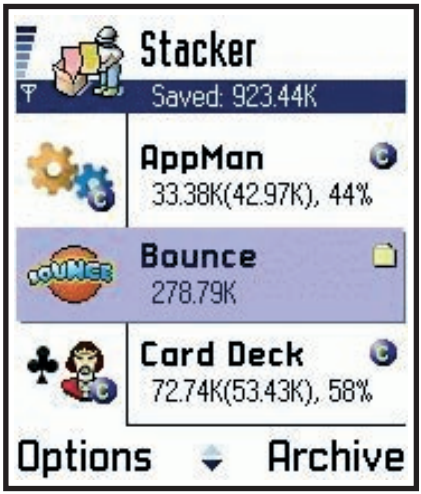
www.freepoc.org

A quart in a pint pot

Nokia does seem to keep misjudging how much memory to put into its smartphones—the 7650 ships with only 4MB for *all* your third-party applications, snapped images and office documents, and of course there's no expansion card slot available. One way of alleviating the problem is through a compression utility such as **Stacker** (€10), which works in similar fashion to FreeCrypt above, but simply compressing files rather than encrypting them.

The decompress-launch-recompress cycle works well enough for applications, though you'll have to manually attend to other large files, such as images and sound clips. Stacker has some nice touches, such as working in the background wherever possible, and automatically compressing the 7650's memory whenever it's activated.

www.symbianware.com



Possible space savings with Stacker

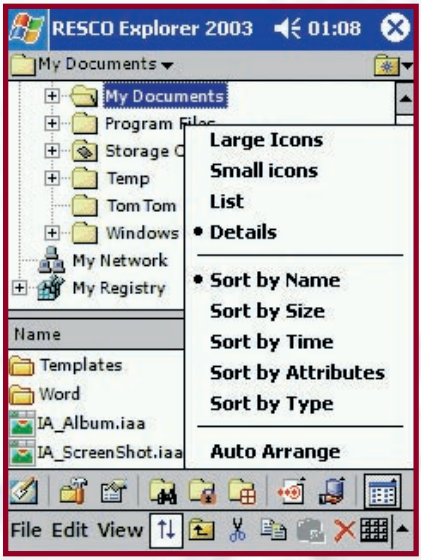
Pocket PC SHORTS

Some of the most interesting new software additions for your Pocket PC handheld or communicator...

The gallant explorer

Pocket PC's built-in File Explorer is the most basic of tools, and serious users soon replace it with a more powerful third party alternative. Already the top of the heap, Resco's File Manager has recently been updated to **Resco Explorer 2003** ($20) which adds some important new capabilities. As well as all the advanced features from the last version, 2003 adds file encryption, Zip compression and a built-in registry editor, effectively adding the functionality of three other programs that would otherwise have to be purchased separately. If you want the last word in Pocket PC file managers, this is it.

www.resco-net.com

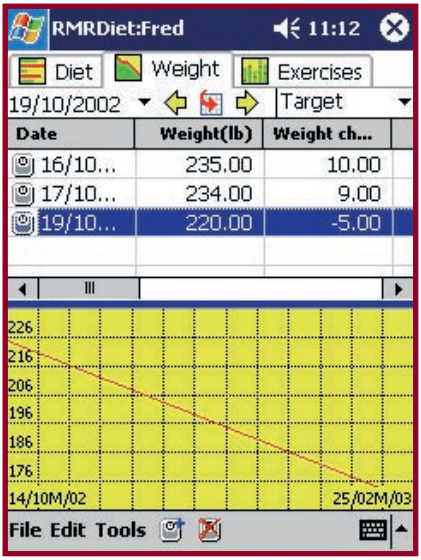


The top file manager just got even better...

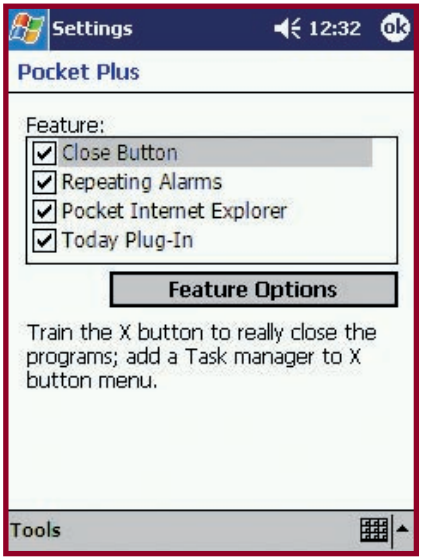
Pocket weight watcher

Whether you'd like to embark on a full-blown diet or just monitor your exercise and food intake, this new Pocket PC version of **RMRDiet** ($25), already popular on both Palm OS and Symbian platforms, is ready to help. Importantly, you can set targets and track your progress via graphs, which should help you stick to the regime you choose. An internal database provides all the nutritional information for hundreds of foods, and it's easy to add your own, making this a remarkably comprehensive aid to better health and fitness.

www.rmrsoft.com



A dietician in your pocket—RMRDiet



Simple access to some powerful features...

The missing pieces?

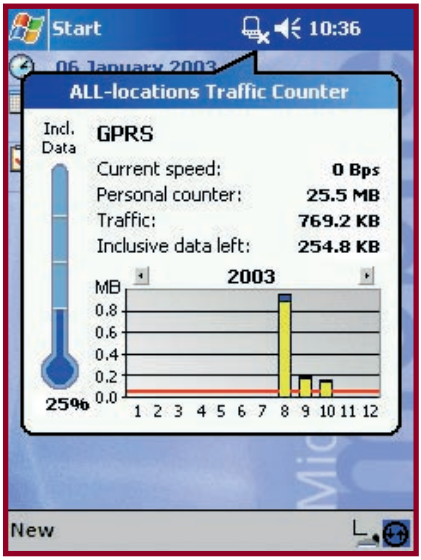
There are so many little utility programs now available for Pocket PC that it's often hard to keep track. A genuinely worthwhile addition is **Pocket Plus** ($10), which adds four features that should arguably have been incorporated into Pocket PC 2002 in the first place.

Perhaps most useful, there's a pop-up task manager, complete with an option to set the 'Close' button at the top right of the screen to exit applications rather than simply minimise them. A repeating alarm facility allows sounds to be played at either normal, maximum or ascending volume, repeating for a specified period between 30 seconds and 'forever'. The third component of the suite adds a full-screen mode to Pocket Explorer, hiding the menu and Start bars to maximise screen space. Rounding off the package is a handy Today screen plug-in that displays battery, backlight and memory status, and allows program icons to be added so that they can be launched directly from the Today screen. Overall, an exceptionally well thought out package at a great price.

www.softspb.com

GPRS helper

There's an ever-growing selection of GPRS usage monitors now appearing, but **GPRS Traffic Counter** ($15) is perhaps the most impressive of the bunch to date. Set up details of your GPRS account either from the extensive built-in list or enter your own custom figures for tariffs, then add specific information on your own billing dates, etc. You can then view a pop-up summary



One of several good GPRS monitors available

Keep track of your Pocket PC usage

screen at any time, showing both textual and graphical representations of your current usage. Nice touches include the ability to export usage logs and monitor GSM and other connection types, as well as GPRS.

www.all-locations.com

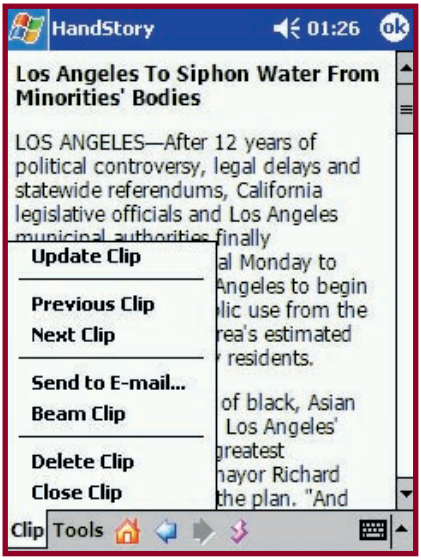
Handheld usage tracker

If you've never kept tabs on how much time you spend using your Pocket PC, **Pocket PC Usage** ($6) is a simple utility that could prove quite an eye-opener. It runs invisibly in the background, constantly updating statistics to a customizable Today screen display. You can find out which is your top day for usage, which hours of the day you use your handheld the most, and what percentage of your usage time is spent connected to the Internet. Probably not something you'll use permanently, but an interesting exercise for heavy users, and it could help to explain why your battery needs charging so frequently!

www.dooblo.com

Your flexible data store

HandStory ($30) has been available for Palm OS some time now, and at last a Pocket PC version has appeared. Designed as a multi-format "information browser", it can be used to store and view text clips, view images, read ebooks and handle web clips. An excellent PC desktop companion application is used to grab text clips from your PC clipboard, convert, crop and save images from most desktop formats, and save snippets of web-based data into HandStory Web Clips, in a similar fashion to AvantGo and Mobipocket.



Text, images, ebooks, web clips and more...

A worthwhile new Pocket PC outliner

The ebook reader uses HandStory's own proprietary format, which offers excellent compression, though with a fairly limited (but growing) selection of out-of-copyright works available from the HandStory web site. A thoroughly excellent tool overall, and things should only get better as the product gains popularity. A feature-limited freeware version is also available.

www.handstory.com

Power outliner

There are quite a number of outliners and hierarchical list managers now available for Pocket PC, including at least a few rather mediocre ones. The brand new **ReenSoft Outliner** ($15) is one of the best to date, with in-place editing of items and support for a wide range of features, such as checkboxes, priorities, start and due dates, plus a fuel gauge-style progress bar to show the completion status of each item. Custom fields can also be set up for category information and for entering numeric values, and it's possible to flag the status of items using a variety of markers. The order of items can also be changed easily by dragging them around the screen—a nice touch.

There's currently no option to add extended notes to an entry, or to import/export the contents of an outline, but otherwise this first version of the product shows plenty of promise.

www.reensoft.com

A CLOSER LOOK

REVIEWS REVIEWS REVIEWS REVIEWS REVIEWS REVIEWS REVIEWS REVIEWS

Star Ratings:

★★★★★	Excellent
★★★★☆	Good
★★★☆☆	Average
★★☆☆☆	Fair
★☆☆☆☆	Poor
☆☆☆☆☆	Dismal

Interpreting reviews

Quality: the Quality star rating reflects how well the product works, whether it includes all the features you'd expect, whether the interface is consistent and easy to use, and in data-based products ialso reflects the quality of the information contained in the program.

Value: the Value star rating reflects the value for money of the product, taken within the context of what the program (or other product) does. Therefore a simple utility program will be rated differently to a sophisticated application at the same price.

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LauncherX 40

Talking Phrasebooks 42

TextMaker 44

Data Plus 48

AppMan 50

Palm Tungsten T

The tiny 'm550' moniker on the back of the Tungsten T gives away part of Palm's game plan, but this is very much more than a routine upgrade to its established m500 line. The new 'Tungsten' name probably reflects the fact that Palm's marketeers thought the same once they'd seen what their research engineers had come up with. A few caveats and criticisms aside, this is a worthy newcomer to the top of Palm's handheld range.

Comparison to Palm's previous flagship, the m515, shows up the Tungsten well, with a wealth of new features. Most obvious of all is the slide-out Graffiti area, which was implemented on the review unit with surprising sturdiness. Far from just a gimmick, being able to slide part of the Tungsten T closed means that its pocketable form factor is stunningly tiny, at only 100mm (4") long. Considering the display, functionality and processing power on offer, this miniaturisation is quite dramatic. The build quality throughout is also impressive, with the sliding mechanism apparently designed to last beyond 100,000 in-out operations.

The case, like the m515, is largely cool metal finish, and at last Palm has dropped that horrible flared bottom from its handheld design. Especially in the closed position, the Tungsten T feels as gorgeous as it looks. The exterior doesn't give too much away—there's a Universal Connector, making it compatible with other m500 series accessories, the now familiar SD/MMC expansion slot, infrared (of course), plus a rather splendid pop-out telescopic stylus.

One innovation (for Palm) is a simple Pocket PC-style button for activating voice recording, with an adjacent microphone and headphone socket. This works very well in practice, either in button-held-down or one-press mode, holding the Tungsten T as you would a dedicated dictaphone. Recording quality is adequate for speech (4-bit, 8KHz, mono) and you can record for up to an hour if you start with a completely empty 16MB of memory. After a HotSync, the voice memos appear in their own Palm Desktop module for playback or conversion to other formats.

The Tungsten T comes with a snug fitting transparent plastic snap-on cover, with a single hole for depressing the 'Navigator' button (for read-only operations, such as checking the time or scanning your Date Book appointments). For anything serious, the cover has to come

off, of course, which means you've got to find somewhere to store it. Most of us will take up Palm's suggestion of clipping the cover onto the back of the unit, where it thankfully doesn't get in the way of anything other than Universal Connector accessories.

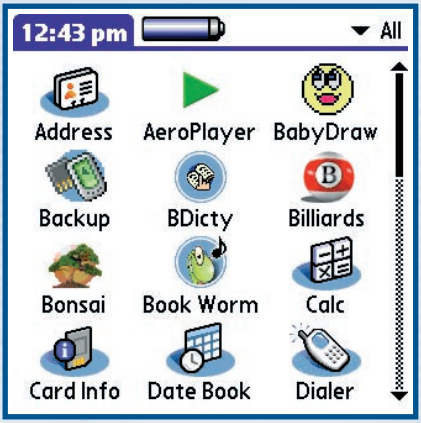
At its heart, the Tungsten T has a speedy Texas Instruments OMAP1510, which incorporates both an ARM925 processor and a Digital Signal Processor (to help with multimedia work), plus controllers for the display, USB, Bluetooth and SD card interfaces. In terms of application launching and screen updates, this is one of the very fastest handhelds we've ever used. The Tungsten T is back in operation an amazing three seconds after a soft reset, while Date Book and other Palm OS staples launch in under a tenth of second. The now-standard 16MB of main memory should be sufficient for most mortals, while the SD slot disappointingly has the same (slow) 1-bit interface as older Palms. Battery life is somewhat disappointing, with a recharge needed daily if in heavy use. Even Palm's own claim for the Tungsten T is only seven days of light use (30 mins a day, at half screen brightness, with no connectivity).

The 16-bit colour screen is excellent, managing to stay clear and readable in all lighting conditions. And, for the first time in a Palm-branded handheld, it's 'hi-res', i.e. 320 by 320 pixels. It's compatible with most older Palm OS software, but even these (designed for 160x160) look a whole lot better on the Tungsten T, which substitutes hi-res fonts and buttons wherever possible. Palm's fonts work exceptionally well, much better than the thin, spindly characters used on OS 4 Sony Clié models.

One downside of hiding the Graffiti area away for much of the time is that there's no default access to the Palm OS Application launcher, necessitating using 'Preferences | Buttons' to assign it to one of the main four hardware buttons. A small change in the Graffiti configura-

At last—voice recording on a Palm-branded handheld

Establishing your own Bluetooth wireless network is easy



A simply gorgeous screen —clear, readable and colourful

The Palm handheld that thinks it's a telephone?

tion is that the 'Calc' icon has finally gone, replaced by one for (on the review unit) the new, improved Preferences.

Perhaps surprisingly, there's little to shout about in Palm OS 5.0, as it's essentially Palm OS 4.x ported over to the new, faster ARM processor. Most applications, even the main built-in ones, run in a special compatibility mode (see also page 116). One unfortunate but inevitable side effect of the OS change is that it breaks the long-established Palm OS 'hack' system—if you like to heavily customise your handheld with hacks galore then you'll have to start again from scratch, trying out dedicated Tungsten T utilities and enhancements (see TealMaster, on page 11). If you're happy with the plain vanilla Palm interface and way of working then you'll feel right at home immediately.

Palm's software bundle continues to grow, with the Tungsten T coming with Documents To Go Professional, MobileDB (a good database application), Acrobat Reader, powerOne Personal (an advanced calculator), PhotoBase (image viewing and cataloguing), VersaMail (a slightly revised version of the old MultiMail Pro application) and Web Browser Pro.

Web Browser Pro is a new proxy-based browser which unusually tries to maintain the structure of tabular page layouts, requiring scrolling left and right as well as up and down. As ever, though, the lack of a windowed environment means that serious ecommerce and web interactivity is rather limited on the handheld. Also included on CD is a small selection of Palm and third party freeware tools.

Palm has steered a sensible line in terms of software for its new Palm OS 5 range. On the one hand, it bundles so much software that a lot of people may never need look elsewhere. And when they do, they should find that the vast majority of generic Palm OS software works just fine.

A wizard-style utility called Phone Link Updater is also included, which makes short work of configuring the Tungsten T to work with a Bluetooth mobile phone. There are a huge number of variations of phone, network provider and country, but configurations for all of these are kept up to date on the web on Palm's servers. Running on your desktop computer, Phone Link Updater asks you about your hardware and network, and then downloads just the configuration files you need.

Also included for Bluetooth use are BlueChat and BlueBoard, both designed for direct wireless communication with other Palm handhelds. Bluetooth seems to be gradually coming of age, with more fuss about new wireless applications and a lot less about the difficulty of getting all the hardware to talk to each other (see, for example, 'An introduction to Bluetooth' in Palmtop User issue 1). A 'Quick Connect' pick list is added to the top of each Address Book contact screen, with Palm OS then offering appropriate telephone and fax connections to the contact via Bluetooth or infrared, or by email or SMS if required. The Tungsten T may not be a communicator on its own, but for those who prefer two-box solutions it certainly does a pretty good job.

Integration of the 5-way 'Navigator' controller into Palm OS 5 is surprisingly tight. It appears that quite a lot of thought has gone into letting you achieve as much as possible in closed, single-handed (and sometimes even cover-on) mode. There's not room here to describe every Navigator effect in every application, suffice it to say that selection, activation and scrolling are all possible. The most obviously impressive example is in Address Book, selecting a contact, bringing up 'Quick Connect', selecting the number required and then making the connection via Bluetooth or infrared. You may never need to use your phone's keypad again.

The Tungsten T's (and Palm OS 5's) multimedia capabilities have been much talked about. Although Palm promised a downloadable MP3 player at the Tungsten T's launch, the only ones to materialise at the time of writing have been from third parties. We tested a handful of MP3 music files with AeroPlayer (*www.aerodromesw.com*) and were disappointed by the frequency response of the Tungsten T's audio system, even over stereo headphones. In practice, music can be downsampled to 64Kbits/s and sounds no worse, and as flat as the 128Kbits/s original. Music playback on handheld computers of this

Quick Connect in action from within Address Book

Good playback of brief video clips, courtesy of Kinoma Player

generation is still something of a novelty, firstly because even with large expansion cards you can't keep more than a couple of hours of music with you, and secondly because you'd ideally have to go through your carefully crafted MP3 collection and make downsampled copies of each file.

Video playback (using Kinoma Player—*www.kinoma.com*) was somewhat more impressive, but mostly because it's rather a novelty. Whichever way you look at audio and video on a Tungsten T (or any other current handheld), they are still only suited for occasional or demonstration use. Games are the other big outlet for a decent sound system, and these are just starting to come on the market with full digital audio, as we'll report in future editions of Game Zone.

Probably our biggest criticism of Palm's continued progress is that its expansion card filing system, VFS, is still as kludgy as it ever was. Third party utilities are needed both to manage cards and to move applications around, and we can see no good reason why this hasn't been brought on board the operating system by now.

Although all-in-one communicators seem to be the inevitable future, there are plenty of people who prefer their handheld and their telephony to be kept separate. The Tungsten T is a lot of handheld computer in a tiny, tiny package and great value, and has caused those pundits who had just about given up on Palm to think again.

Steve Litchfield

Palm Tungsten T

From: All major Palm dealers

Contact: www.palm.com

Price: £300 inc. VAT (approx.)

Quality: ★★★★½

Value: ★★★★½

Sony NX70/NX70V

Sony's Clié NX70 and NX70V are very similar models, the NX70V differing only by having a built-in digital camera. In appearance, both closely resemble the NR series (see the review in issue 1). They have the same clamshell design, the same 180° rotating screen, the same keyboard and button placement, the same ports for the supplied headphones and MP3 remote control, and are the same length and width. There are new microphone holes just above the hinge, on both sides of the display panel, to support the new voice recorder. Having the microphone accessible from either side allows you to record in both opened and 'tablet' mode, and provides an outside-facing microphone when recording a video clip. Our review model was the same silver colour as the NR series, though you can also purchase the NX70 and NX70V in gunmetal grey.

On the Clié's back you'll see a repositioned speaker and reset hole, and a bulge that adds about 7mm (0.28") to the thickness at the top end of the device. This bulge is needed to accommodate a CompactFlash (CF) slot, but disappointingly this won't accept anything other than Sony's own proprietary Wi-Fi wireless LAN card.

At 227g (8oz), the new Cliés are noticeably heavier than the older design, but the additional weight is in the lower half of the clamshell, counteracting the 'top-heavy' feeling that the NR70 series suffered from. The new cradle design accommodates the CF slot bulge (although at a pinch an old NR cradle could be used with a NX device, and vice versa). The new cradle, together with the speaker repositioning, means that the speaker is no longer covered when cradled. Sony also now provides a small adaptor plug that lets you connect power directly to the handheld, for recharging while travelling without having to bring the cradle along.

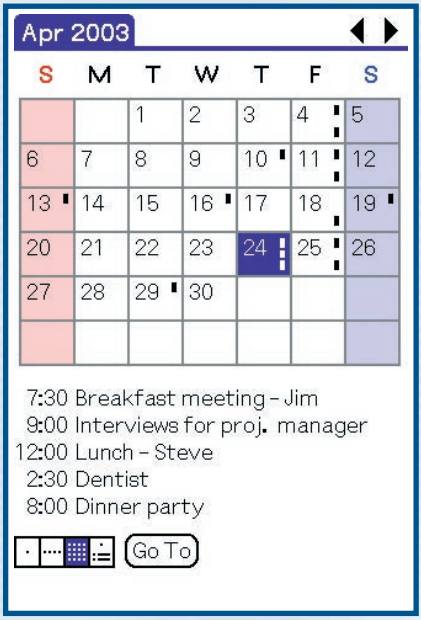
Initial welcome software tweaks include the blinking of the power light if you attempt to turn on the handheld while the hold button is engaged (on previous models, the unit simply appeared dead), a volume control in the status area (you can now instantly mute the device) and upgrading of all the built-in applications to be able to minimise the virtual Graffiti area.

The new application launcher

The more substantial changes include a voice recorder, which can be used for voice memos or to create custom alarms. In the NX70V, the camera now has an improved resolution of 640x480 pixels and it can record video clips, with sound, directly to Memory Stick expansion cards. A 'Capture' button can be mapped to launch the camera, movie recorder or voice recorder applications.

Most of the Clié-specific applications have been upgraded or replaced for these new OS 5 models. In particular, 'MS Gate', used to port files to and from your Memory Stick, is now replaced with 'Clié Files', and the 'PG Pocket' photo viewer is now 'Clié Viewer'. All the recording applications (voice, picture, and movie) have hotlinks to CliéMail, letting you send a recording via email, with the recording as an attachment in WAV format (for sounds), JPG (for images) or MQV (one of the latest QuickTime movie variants) for video clips.

New for the NX devices is Clié Launcher. This is both novel and useful and, by allowing you to specify which applications should appear first in each category, makes it easy to tailor the launcher for your specific use. The 'Favourites' area of the launcher nicely overcomes the lack of hardware button access in tablet mode. Clié Memo is a basic doodling application, although without the handy alarm feature that Palm Note Pad provides. Clié Album provides a useful way to collate pictures together for a particular event, hobby or theme, with appropriate captions, dates, and so on. A Macromedia Flash Player is also provided, should you want to carry your favourite Flash clips in your pocket.



Date Book, enhanced to use the full display...

...as is the built-in Address Book

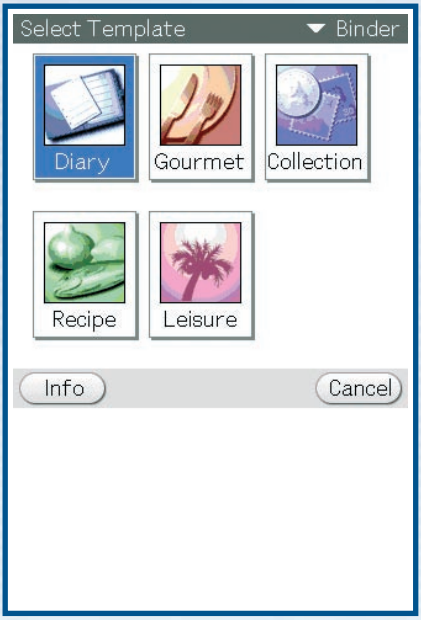
Finally, NetFront is a new, high resolution (320x480) web browser, supporting cookies, SSL and JavaScript.

Performance is impressive. The NX series both use an Intel StrongARM running at 200MHz, which make them the most powerful Palm OS handhelds available today, and in most benchmarks the NX devices perform better than Palm's Tungsten T (although SD card access remains faster than Memory Stick access).

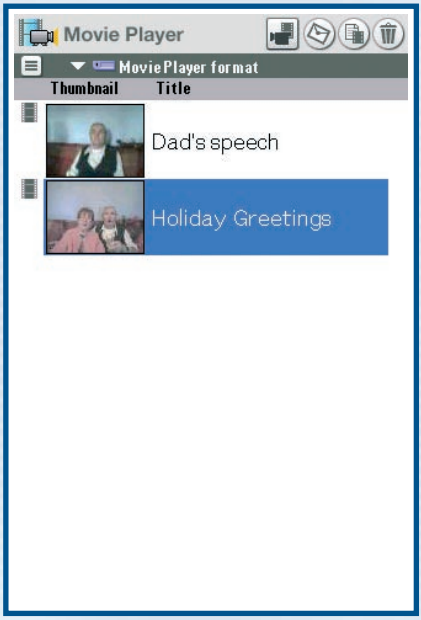
The Bluetooth Memory Stick works as expected (once you download the OS 5 drivers), but it's disappointing that it uses the memory expansion slot. Much better would have been built-in Bluetooth (as it is in the recently announced NZ90). The optional Wi-Fi support is welcome, allowing the choice of built-in wireless connectivity to desktop networks and routers (see our Wi-Fi feature in the last issue).

It's dismaying to note that, although advertised as a 16MB machine, Sony reserves a hefty 5MB of this for internal use—and this is before you install any of the optional applications from CD, such as Clié Mail, Desktop to Go or the NetFront browser, which requires an astonishing 2MB of space just for the application itself, plus 6MB during installation. This will force heavy users to rely on using a Memory Stick expansion card to store files, rather excluding the use of this slot for connectivity or other accessories.

Aside from memory end expansion limitations the NX devices are still easy



Clié Album includes templates to help group image files together



Store and play movies on your handheld

to recommend, though you may prefer to wait for the recently-announced NZ90 (see page 5), which has a mega-pixel auto-focus camera with flash and *built-in* Bluetooth connectivity. Alternatively, if pocket space is at a premium but you still want high resolution colour, voice recorder and built-in Bluetooth, then consider the Palm Tungsten T instead (see page 23).

Note that the NX70 model is not currently available in the UK, only the NX70V.

Steve Turczyn

Sony NX70/NX70V

From: All major Sony dealers

Contact: www.sonystyle.com

Price: £450 inc. VAT for NX70V (see text)

Quality: ★★★½☆

Value: ★★★★☆

Acer s60

With Palm OS 5 devices now appearing from both Palm and Sony, it may seem a little strange for a newcomer to the Palm OS scene, Acer, to choose an OS 4 unit as its first release. As it turns out, though, the new s60 makes for a well constructed and desirable handheld that suffers little from not having Palm's latest and greatest operating system within.

Oddly enough, when first switching on the unit, the Application screen appears more reminiscent of OS 5 than OS 4, with a high resolution 320x320 pixel screen and Acer's own custom icons and font set. Just like on Palm's own OS 5 Tungsten models, the s60 uses a minimum two pixel stroke width for all text, which is much easier on the eye than the thin, spindly typefaces used on Sony's high resolution OS 4 screens.

On the hardware side, specifications are pretty standard fare, with 16MB of internal memory, a delightfully crisp and bright 4096-colour frontlit screen, OS 4.1 and Acer's own proprietary USB sync cradle/expansion connector, billed as the 'Acer Versatile Connector'.

Although the casing of the unit is plastic throughout, it has a good solid feel and is styled in an especially attractive two-tone aluminium/titanium colour scheme. The four standard application buttons for the built-in Date Book, Address Book, To Do List and Memo Pad are nicely sized with a positive feel, and the up/down scroll button is admirably large and comfortable to use. A small, recessed flip switch at the bottom of the unit can be used to prevent accidental switch-on while the handheld is stuffed into a pocket with the supplied leather flip cover, and a small Sony-style 'Back' button at the top left is provided to step backwards through application screens.

A useful voice memo facility is incorporated, utilising a small microphone near the base of the unit. The s60 also offers MP3 music playback, so is supplied with an earphone socket and headset. A version without the MP3 facility will be available in certain countries, sold as the s50, at a lower price. The package is completed with a modest 40 page printed manual, HotSync cradle/mains adaptor and software CD. A comprehensive 300 page user guide is supplied in PDF format on the accompanying CD.

Acer uses a Sony Memory Stick slot for memory and peripheral expansion rather than the more common SD (Secure Digital) standard, and mimics Sony's approach of selling its Palm OS handhelds as PC-compatible only, with no Macintosh version of the Palm Desktop software supplied.

Acer's own custom icons and hi-res fonts

MP3 music playback on the s60

Bundled software includes a pre-loaded Filer application to help manage files stored on Memory Stick, and a 'HiDensity' item under Preferences to provide display compatibility for the odd rogue application that doesn't automatically adjust for the hi-res screen. Disappointingly, there are no 'office' applications bundled with the package, but the accompanying CD includes some useful items, such as 'AudioBox' for handling MP3 playback, 'PhotoWiz' for viewing images, and WalkReader, which allows text, Microsoft Word and HTML documents to be converted on the desktop and viewed on the Acer.

Taken in comparison with other Palm OS devices on the market, the s60 fares extremely well. By maintaining the older Palm operating system but improving on its basic appearance by intelligent use of text and graphics, it almost makes you feel as though you're getting the best of both worlds, with 100 percent compatibility with older applications and hacks, but an interface that's just that little bit slicker and more pleasant to use.

Of course, the old-style 33MHz processor does feel rather pedestrian in comparison to the latest Palm Tungsten and Sony Clié models, but at a recommended price of only £229 including VAT, the Acer is an impressively specified device that stands up exceedingly well against similarly-priced competition.

It remains to be seen how many hardware peripherals emerge to fit the proprietary Acer HotSync connector, but this consideration aside, the Acer s60 is truly a best buy.

Steve Clack

Acer s60

From: All major Acer dealers

Contact: global.acer.com

Price: £229 inc. VAT approx.

Quality: ★★★★½

Value: ★★★★½

Acer n20w

Corresponding to the Palm OS-powered s60 reviewed on the previous pages, the n20w is Acer's first foray into Pocket PC 2002. As with the s60, this new model doesn't represent the pinnacle of handheld technology for the platform, but offers a solid, well-specified device at an exceptionally good price.

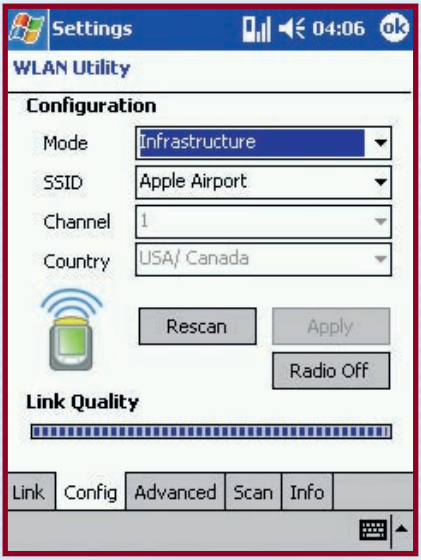
Not the most elegantly styled Pocket PC in town, the n20w is a rather chunky 20mm (0.8") thick, and heavy too, at over 230g (8.1oz). As well as a top-of-the-line 400MHz XScale processor and 64MB of internal memory, the unit also houses a Wi-Fi (802.11b) wireless LAN unit and a large (2000mAh) removable battery pack.

In terms of overall specifications, the n20w has many similarities to Toshiba's e740-WF, as reviewed in the last issue. The screen is almost identical (i.e. good, but nowhere near as good as the HP iPAQ 3900 series), it incorporates an almost identical jog dial for navigation, plus of course the same processor and the removable battery feature.

Acer-specific features include a small button beneath the jog dial to invoke the Windows Start menu, and an adjacent 'Hold' toggle switch to prevent accidental switch-on.

As with the s60, Acer has plumped for Sony Memory Stick expansion rather than SD. Less of a limitation under Palm OS, where add-on software applications tend to be smaller and less ambitious, this could become something of a problem on Pocket PC. Memory Stick cards are currently only available up to 128MB capacity, and with sophisticated Pocket PC mapping solutions (see page 61) already taking up more than 100MB of space and some of the most elaborate games at almost 20MB each, power users may be forced to juggle multiple cards in order to squeeze everything in. Larger capacity Memory Sticks will be with us eventually, but for the time being the 128MB limit will be an important consideration for some users.

The n20w is otherwise a straightforward, high-end Pocket PC device, with the usual suite of built-in applications, as per our Pocket PC 2002 feature back in issue 1. There's naturally a wireless LAN utility to set up, control and monitor the Wi-Fi unit, and our test unit took only moments to configure, and worked happily at ranges of up to 10 metres and beyond. The only other notable built-in software additions are a backup/restore utility and 'RecentDo', a simple but effective pop-up screen that lists the most



Easy access to your wireless network, courtesy of an integral 802.11b radio

'RecentDo', accessed from the Start menu, will launch your most recent programs and files

recently-opened programs and documents, ready for one-tap access.

Bundled software supplied on CD is disappointing, with nothing more than IA Album Lite (a basic image viewer) and the PocketTV MPEG player.

With only a single Memory Stick expansion slot there's sadly no way to add Bluetooth to the package at present.

Aside from the lack of Acer-specific peripherals at this stage and the questionable use of Memory Stick rather than Secure Digital memory expansion, the n20w is a fast and powerful Pocket PC. Although, significantly, around 30% thicker and heavier than a Toshiba e740-WF, it offers similar performance and functionality for at least £100 less.

If you like your handhelds sleek and lightweight then the n20w won't be for you, but if you're looking for wireless networking at the best possible price then this is the lowest cost option on the market today.

A (slimmer and lighter) version without the built-in wireless networking will be available shortly.

Steve Clack

Acer n20w

From: All major Acer dealers

Contact: global.acer.com

Price: £400 inc. VAT approx.

Quality: ★★★½☆

Value: ★★★★☆

Toshiba e330

Yesterday's high-performance handheld is tomorrow's entry-level model, and Toshiba's new e330 is a bottom-of-the-range handheld that wouldn't have been out of place as a flagship model as little as three or four months ago.

The e330 is best classified as either a souped-up e310 (the model it replaced) or a slimmed down e740 (Toshiba's high-end model, as reviewed in the last issue). With a 300MHz XScale processor rather than the e740's 400MHz version, the same 64MB of memory and almost identical front panel layout, the most obvious difference between the two models is the thickness, which at only 12.5mm (0.5") makes the e330 one of the very thinnest Pocket PCs on the market. At only 140g (4.8oz) it's one of the lightest too.

In order to cut down on thickness, weight and price, you'll find no integral Bluetooth or Wi-Fi options, and a single SD expansion slot rather than Toshiba's more usual SD/CF slot combination. Unlikely to be a major bugbear for the e330's target audience, these are all logical compromises for a machine at this price point.

Most of the (relatively minor) construction quality criticisms of the e740 range apply, with a slightly flimsy jog dial, smallish navigation button and a horrible plastic stylus that rattles in the casing. On the plus side, the 'Action' button at the top left seems to have been re-engineered to make it protrude a little less, reducing the likelihood of accidentally actuating it—something that is a major annoyance on the e740.

The package is otherwise e740 all the way, with a good solid sync cradle, smart leather slip case and a printed user manual.

If you want a well-specified Pocket PC but have no need for wireless connectivity then the Toshiba e330 may well suit your needs. It's slim, light, fast and reasonably priced.

Steve Clack

Toshiba e330

From: All major Toshiba dealers

Contact: www.toshiba.com

Price: £350 inc. VAT approx.

Quality: ★★★½☆

Value: ★★★½☆

Pocket LOOX 600

Though not an important factor for many users, a number of the new Pocket PC devices released in recent months have been sorely lacking in style, appearing as rather anonymous-looking rectangular aluminium boxes. The Fujitsu Siemens Pocket LOOX 600 is a refreshing departure from this trend, with its stylish two-tone moulded plastic casing, making it a device that most certainly has its own 'look'.

With a 400MHz XScale processor, 64MB memory, Bluetooth built-in, both SD/MMC and CF expansion slots, the Pocket LOOX sounds like quite a beast. Add in a good range of plug-in modules and it begins to sound like the perfect Pocket PC handheld.

The chunky, curvaceous casing is exceptionally comfortable to hold, feeling rather like an oversized bar of soap. Down the left side there's the SD/MMC expansion slot, infrared port, a well-placed jog dial for scrolling through documents, plus a button to invoke FSCSpeedMenu, a handy built-in program and document launcher. On the right side is an on/off switch for the built-in Bluetooth unit and the standard Pocket PC 'Action' button, more commonly positioned on the left side. The top edge of the unit is taken up mostly by the CompactFlash expansion slot, together with the usual stylus silo and MP3 headphone socket.

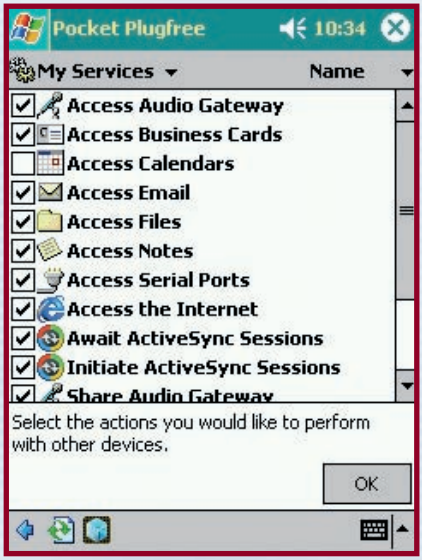
As with most modern Pocket PCs, the 320x240 pixel colour screen of the Pocket LOOX is admirably bright, but has a slight 'fogginess' to its appearance. This is something that so far has only been absent on the latest iPAQ 3900 series, plus the newest Sony Clié and Palm Tungsten models, all of which provide an altogether higher standard of clarity and contrast. The apparent quality of the Pocket LOOX is otherwise excellent, apart from the caveat that plastic casings never quite have the same solid feel as metal ones. The use of plastic does of course help to keep the weight down, and at 170g (6oz) this is lighter than most Pocket PCs with this level of functionality and expansion built-in.

Supplied with the Pocket LOOX is the usual docking cradle and mains adaptor, together with a rather cheap (but functional) black nylon slip case and a spare (telescopic) stylus. Although of fairly lightweight plastic construction, the docking cradle forms an exceptionally good, solid fit with the handheld—perhaps the best we've seen for a Pocket PC.

Two CDs are included, one containing the standard PC connectivity suite, the other with the bundled software and documentation.

As well as FSCSpeedMenu, built-in software includes a utility to back up

FSCSpeedMenu is a useful built-in launcher



Pocket Plugfree simplifies Bluetooth setup

the internal memory to a storage card, and Pocket Plugfree, an excellent addition that helps to connect, configure and partner other Bluetooth devices to the Pocket LOOX. To simplify things for the novice, it includes a 'Wizard' to help walk you through the process. Finally, there's an option under the Settings menu to run the unit with the CPU in power-saving mode, which slows it down somewhat but usefully increases the battery life. Given that the speed decrease is barely noticeable in most applications, this option can be very useful when you wish to conserve power while away from the charger.

The extra CD contains some excellent additional software, though the 'documentation' on the disk is so poor (and some of it appears only in German) that in most cases you'll need to load up the programs to find out what they do.

Message Master Mobile Client allows the Pocket LOOX to exchange phone books with Bluetooth-enabled phones, compile SMS text messages, access other SMS-based services such as news and weather, and even send emails via SMS. FileCrypto adds a passworded and encrypted folder to your Pocket PC, for secure file storage. Nyditot Virtual Display allows the screen to be rotated into any orientation, or even to use the Pocket PC screen to provide a 'virtual', scrollable window onto a larger area. It also adds a variety of desktop 'themes', just like Windows on a full-sized PC. KSE Truefax allows you to create, send and receive faxes via a suitable mobile connection. Westtek ClearVue adds a read-only viewer for Microsoft Word, Excel and PowerPoint documents, and provides accurately rendered page images of even complex documents.

The bundled software is rounded off with a copy of Pocket Informant (see page 58) an extremely powerful Calendar/Contacts replacement. All in all, there's more than £50 worth of good software included—particularly useful if you're just investing in your first Pocket PC and want to keep costs down.

As a complete package, there's very little that the Pocket LOOX is lacking. The provision of a Type I/Type II CompactFlash slot in addition to SD/MMC expansion may seem a little redundant at first, but this provides extra flexibility for hardware and memory add-ons, and will be useful for anyone with old CF storage cards lying around from an older handheld.

Peripheral support is always an issue with new models, and Fujitsu Siemens has done a good job on this, with its own tri-band GPRS/GSM and Wi-Fi CF cards already available, together with a neat, collapsible plug-in keyboard.

It's good to see Bluetooth built-in as standard, particularly at this price point, and given the high specification of the processor and full 64MB memory complement, this is a very desirable handheld.

Steve Clack

Pocket LOOX 600

From: All major Fujitsu Siemens dealers

Contact: www.fujitsu.com

Price: £410 inc. VAT approx.

Quality: ★★★★☆

Value: ★★★★☆

LauncherX

version 1.0.2

Application launchers are something uniquely personal in the handheld computer world. There are an enormous number of them available, the most recent of which is the much-publicised and long awaited LauncherX. Many users are quite content with the default Palm OS Applications launcher, which includes pick-list based categorisation and menu commands for simple operations. But there's no denying that it's clunky in places and can slow down significantly as you load up more and more applications. And as soon as you start to 'manage' your expansion card properly you'll need third party tools anyway, which is where LauncherX comes in, encompassing all this and more.

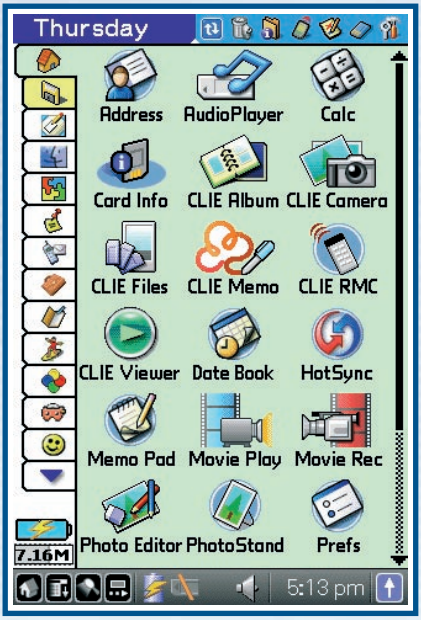
At its simplest, LauncherX provides a variety of tabbed application screens, replacing the Palm OS category pick list, with the main advantage being that you can drag and drop icons onto tabs, far quicker and easier than using the 'Category' menu command in the Palm OS launcher.

A panel of 'gadgets', by default at the bottom of the screen, provides a drag and drop interface for common operations, such as deletion, beaming, moving applications to expansion card, etc. In all, there are 13 gadgets provided, of which you can place as many as will fit in the panel positions required.

Possibly the most useful is the 'Card Tool' gadget, which operates in two modes. Dragging and dropping an application icon onto it brings up 'Copy' and 'Move' options (onto or off expansion card, depending on where the application currently lives). Tapping directly on the gadget brings up a capable file browser and manager, giving you more control over which individual files live where. Given the still-fragile nature of the way Palm OS applications are stored on and launched from expansion card, the more control the better.

Choosing a skin within LauncherX

The default hi-res skin on the Palm Tungsten

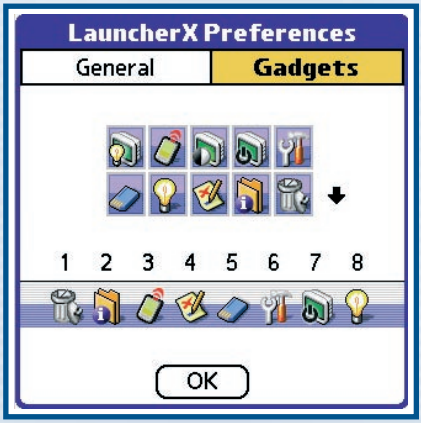


LauncherX in one of its Active Skins on a Sony NX70

'Moving' an application with LauncherX merely copies across the main '.prc' file and deletes the original, but at least this is less hassle than the Palm OS launcher, in which you have to do both operations manually.

A 'Refresh' icon at the top of the screen comes into its own when you've got a lot of applications installed. By setting LauncherX to refresh its lists only when told to, the presentation of icons can be speeded up somewhat.

Finally, you won't be surprised to hear that the modern trend towards 'skinnable' applications is reflected here. Over a dozen 'Active Skins' are currently available, providing a variety



Configuring which gadgets appear on the popup panel

of looks depending on your device and preferences.

All in all, if you want to make your interaction with Palm OS a little more aesthetically pleasing and add a toolkit of useful file management utilities at the same time, then LauncherX is one of the best options currently available.

Steve Litchfield

LauncherX

From: Little Mobile Creations

Contact: www.LauncherX.com

Price: $25

Quality: ★★★★☆

Value: ★★★☆☆

Talking Phrasebooks

Beiks' BDicty range of language dictionaries are fairly well known, but this is something new, inspired by the digital audio capabilities in the current generation of Palm OS and Pocket PC devices. Buoyed up by the audio quality and expansion card space now available, sampled sound is starting to become a lot more practical.

A talking phrasebook is an obvious application, especially when you're already struggling with a foreign language. Beiks has sensibly used live actors to record each clip (using a very low bit rate, of course, similar to that used by Palm for its own Tungsten T Voice Memo function), so you can hear each phrase as it's supposed to be spoken. This is not only handy for trying to converse when abroad (at worst, you can play the sound clip straight back to the native), but also for trying to learn the language properly.

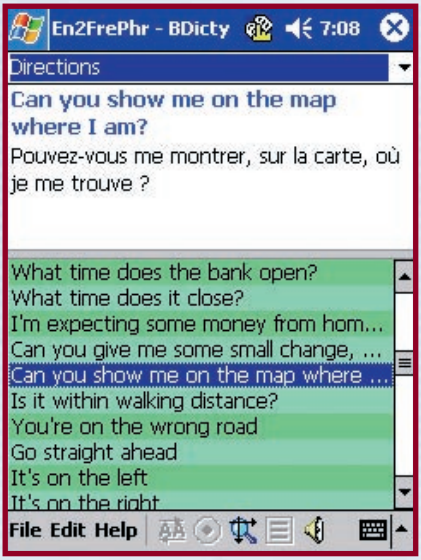
There are five collections, each with a different source language (English, French, Spanish, German and Italian) and including all the others as destinations. Each collection takes up to 10MB on expansion card if you install all five languages at a time, but you can easily just include the ones you need.

In all there are 256 English phrases, broken down into 14 categories, which is a bit disappointing considering the possible scope here, and that 64MB and 128MB expansion cards are commonplace. Surely there's room for even more variety and depth?

As it is, the categories range from 'Basic expressions' and 'Question words' right through to 'Leisure' and 'Emergencies'. Typical phrases include "May I get you a drink?" and "I would like to see a doctor". While not covering every eventuality (breaking down in a car springs to mind), there's enough here for day to day use, and for educational purposes on the way to your country of choice.

Choosing a phrase category to take you to the appropriate section

The phrases themselves—tapping the speaker gives you the live spoken version



Selecting a phrase under Pocket PC

Having selected a phrase, tapping on the speaker icon plays back the appropriate sound sample, although unfortunately the volume of playback is fixed.

As we went to press, Talking Phrasebooks was being launched for the Pocket PC platform, with the promise of an EPOC/Symbian port in the future. This is a brave first attempt in this field, especially the use of native-speaking actors. We're sure a better, more thorough and polished standalone application can't be too far off, and Beiks is currently leading the race to produce it.

Steve Litchfield

Talking Phrasebooks

From: Beiks

Contact: www.beiks.com

Price: $30

Quality: ★★★½☆

Value: ★★★½☆

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TextMaker

Version 1 (build 368)

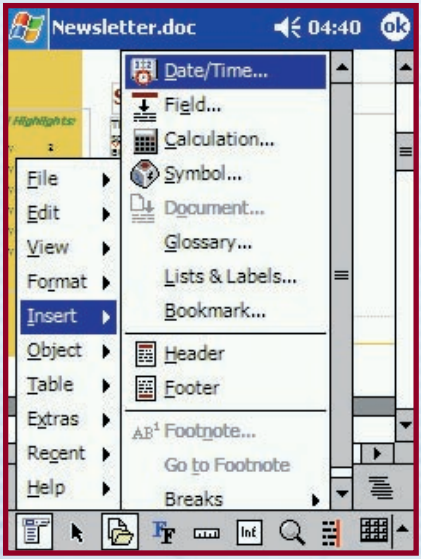
Until now, Psion's built-in Word application (and its descendant on the Nokia 9200 series communicators) represented the pinnacle of handheld word processors. With support for style sheets and embedded objects, it was a giant step ahead of anything available for either Palm OS or Pocket PC.

TextMaker, for Pocket PC and (now discontinued) keyboard-based handheld PCs, ups the stakes by a huge margin, with capabilities that wouldn't look out of place on a desktop word processor.

In fact, the feature list is quite staggering for a handheld application, and a quick browse through the menus reveals an array of advanced tools that have never before been seen on a PDA. There are so many features that the menus are nested, and some of them contain such a long list of items that they even have their own scrollbars.

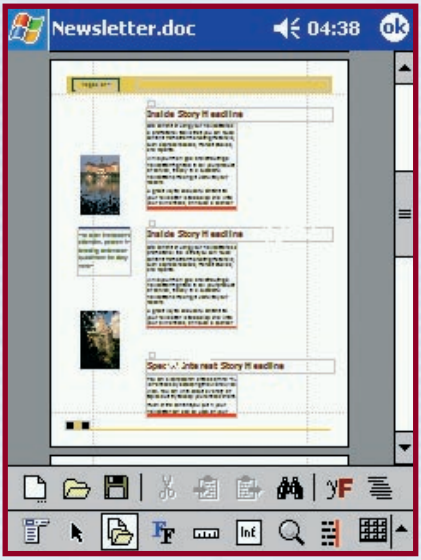
Understandable for such an ambitious program, TextMaker installation takes over 6MB, and for best performance should ideally be done into internal RAM. Although it supports Microsoft Word and RTF formats, there's also the option to use TextMaker's own document format. This is used in conjunction with a PC version of TextMaker, which can be purchased together with the handheld application for an additional $20.

Without going into pages of detail, you'll find most high-end word processor functions included in TextMaker, including tables, forms, images and graphics, tables of contents, indices, mail-merging, footnotes, endnotes, glossaries, and so

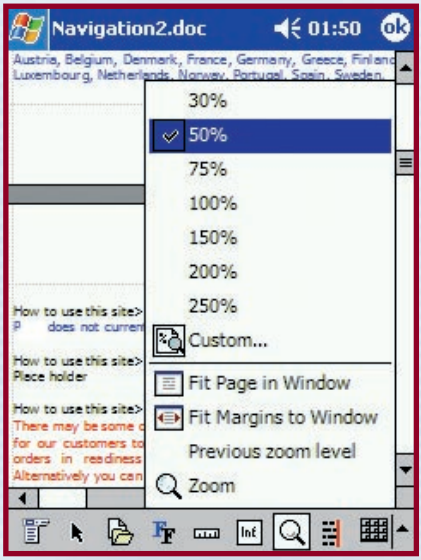


So many features that the menus are nested, and some even have their own scrollbars...

Multiple toolbars provide quick access to common features, and are easily toggled



Complex documents appear in all their glory, complete with images, text boxes, etc.



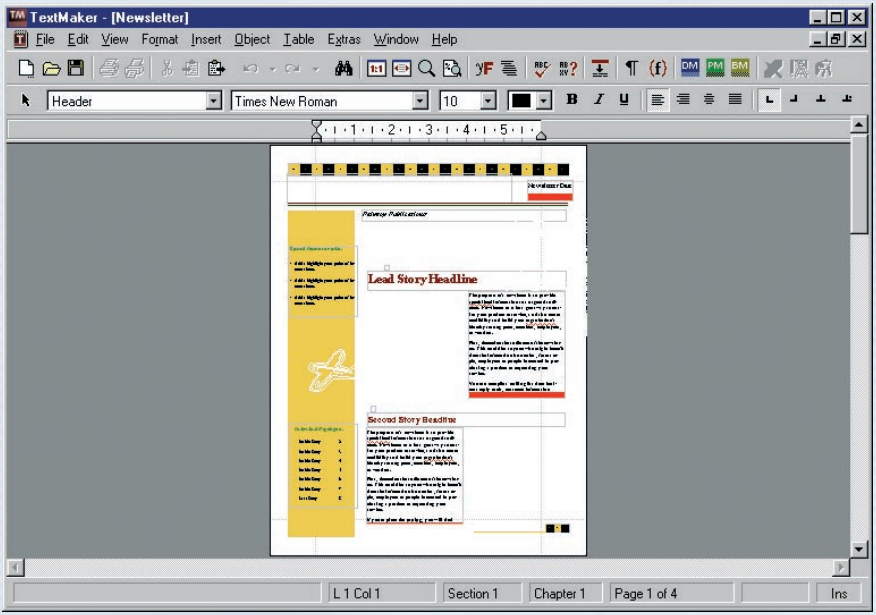
Flexible zooming and display options make it easy to get to grips with the small screen size

on. Perhaps most notably absent is an equivalent to Microsoft Word's document comparison features, which allow multiple users to annotate and correct a shared document.

Clever as TextMaker is, it's impossible to shoehorn *all* the functionality of a 100MB desktop word processor into 6MB on a shirt pocket device, so you'll find no macros, wizards or auto-formatting options, but suffice to say that this product does *far* more than any other handheld word processing solution.

With such an armoury of features, it's no surprise that TextMaker can appear a little sluggish at times, with a wait of several tens of seconds when opening or saving a multi-page Microsoft Word document containing a lot of complex formatting. This can be unnerving at times, as the program may simply stop responding to input while it processes the mass of information it's about to display. Given that Pocket PC's built-in Pocket Word can barely handle any formatting beyond simple headings and bulleted lists, TextMaker's slower speed is a small price to pay.

The classic test of importing a complex Microsoft Word document, making a small change, then re-saving before sending back to the PC can reveal horrifying problems with most handheld word processing solutions (with the notable exception of Dataviz's Documents To Go on Palm OS). TextMaker is truly impressive here, retaining properly positioned headings, indents, paragraph and line spacings, footnotes, hyperlinks, text boxes, coloured text, etc. Inevitable slight variations in spacings can cause pagination to vary slightly in the re-



A credible alternative to Microsoft Word? TextMaker running on a desktop PC

saved document, but nothing to cause concern. Saving in either Microsoft Word or TextMaker native formats seem to give identical results, confirming excellent compatibility in all directions.

Although the program is almost certainly not 100% infallible, and certain combinations of intricate formatting may not appear quite as expected, it performed faultlessly on the dozen or so large test documents we tried, indicating that it's certainly very hard to catch it out.

There's a massive amount of functionality built into TextMaker, but it's also perfectly suited to more modest word processing tasks. Access to commonly-used features is simplified by the use of pop-up toolbars and, for anyone used to Microsoft Word on a PC, there is enough commonality to reduce the learning curve substantially.

Working with large, complex documents on the small Pocket PC screen might be seen as the greatest barrier to the task, but a flexible zoom option and the ability to either use an accurate 'page preview' mode or simply fit text to the current screen width makes the process remarkably painless, and scrolling through even long and complex documents is acceptably fast.

For serious document creation work on the handheld, a full set of spell checking and hyphenation dictionaries is supplied for 17 languages, together with a full thesaurus for at least a dozen, and there's even an interactive, 'check-as-you-type' spell checking facility.

As TextMaker is clearly designed as a writer's tool, it's a great pity that the word count facility is buried within the 'File | Properties...' menu command, and takes up to seven taps (and at least 10 seconds) to access. This is particularly frustrating, as most of even the lesser-used features of TextMaker are much more readily accessible. Performing a word count on a complex, 15,000 word document seemed to prove too much on our (400MHz XScale) test machine, with the unit apparently freezing after many minutes of inactivity. It appears that TextMaker *can* be foiled by very long and/or very complicated documents, if only when trying to perform a word count—understandable given the practical limitations of the platform, but worth noting for those with very high expectations.

For many users, the ability to import and export desktop documents without loss of formatting and make use of a full set of proofing tools will be enough to justify TextMaker's $50 price. Anyone needing to modify documents from others and return them without destroying important formatting will find the program an absolute must. Although many people will never use 90% of its advanced features, it's probably true that 90% of Pocket PC users would benefit from owning a copy of TextMaker.

Taking the optional $70 package of both handheld and desktop versions, TextMaker offers a credible alternative to the omnipotent Microsoft Word, particularly as it's quite capable of reading and saving into Word format, as well as TextMaker and RTF.

Some people may guffaw at the idea of 'serious' word processing on a keyboardless handheld, but the combination of built-in input options and plug-in keyboards for Pocket PC makes it more practical than most would imagine.

Although Pocket Word still has its place as a quick-and-dirty text processor, TextMaker is now the undisputed king of handheld word processing. If you need to create (rather than simply edit) very complex word processed documents on a handheld, then a Pocket PC and a copy of TextMaker is currently the only game in town.

Steve Clack

TextMaker

From: SoftMaker Software

Contact: www.softmaker.de

Price: $50/$70 (see text)

Quality: ★★★★½

Value: ★★★★½

Data Plus

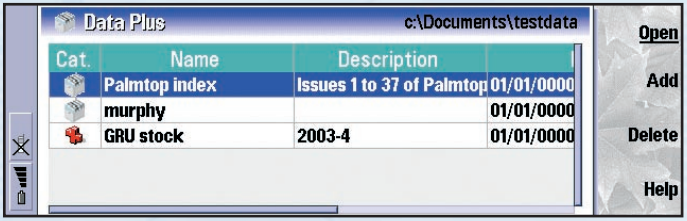
Version 1.00

Our many longstanding Psion readers will get the gist of Data Plus immediately just from its name. Data, of course, was the free-form, flat file database built into every Psion palmtop, and was much loved. As the EPOC operating system progressed to version 6 under the Symbian brand name, for Nokia's 9200 series, one of the biggest disappointments was the lack of Data, omitted seemingly without good reason. It has been left to third parties to come up with replacements, with Data Plus being the latest contender.

Like the much more modestly priced ($25) Power Data (*www.epocware.com*), Data Plus improves on Psion Data enormously, with multiple databases within a single 'document', password protection and filters (to show just records meeting certain combinations of criteria). With Power Data's developers now concentrating on newer Symbian platforms such as Series 60, Data Plus seems to have gained the upper hand, with a delimited text import system that actually works, proper security and database encryption (including separate read and write access passwords), some innovative 'smart' fields, and a powerful system of configurable views and filters.

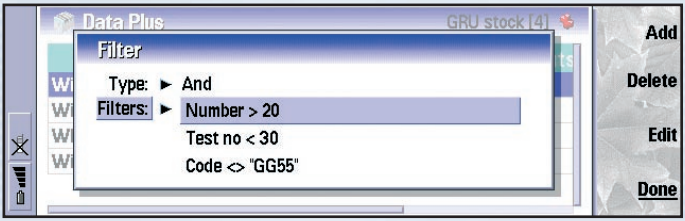
For beginner and expert alike, Data Plus is currently the best starting point, especially if there is a lot of data to bring in from legacy databases on other PDAs or systems. Data import from tab or comma-delimited text files is fiddly but very flexible, with absolute control over which fields get mapped to where. We managed to import a 100K, 1400 record magazine index without problems and, once imported, the database loaded up in under two seconds.

The 'smart' fields mentioned above tie Data Plus cleverly into other communicator applications. Thus email fields can be used to kick off emails, telephone number fields to start phone calls,



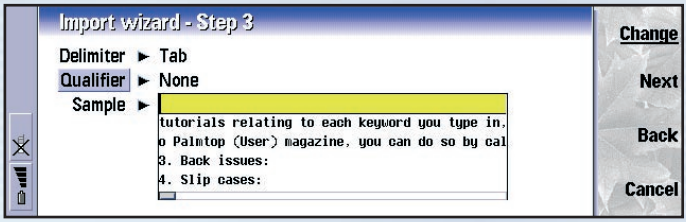
Top level view of three separate database tables within a Data Plus file

A typical record view, shown in split-screen mode (browser and card)



Setting up a complicated logical 'AND' filter on a stock control database

Importing existing data from delimited text files is fiddly but powerful



GSM mobile fields to instigate SMS messages, etc.

It's not all sweetness and light though, and the version number of 1.00 correctly reflects the immaturity of the interface right across the board. From menu commands to shortcuts to command button assignments, Data Plus isn't yet as intuitive as it could be, especially compared to the tight efficiency of Power Data. The setting up of filters and views in particular takes quite a bit of fiddling with before all becomes clear. Once set up, working and saved, though, both database views and filters can be called upon in the future with only a couple of button presses. For company use, a properly set-up Data Plus would make an excellent database workhorse.

Perhaps another reflection of the early version number, Data Plus makes rather hard work of viewing and editing fields with significant amounts of text. Extra coding is needed to provide intelligent word wrapping, without which Data Plus's usefulness is restricted. A final gripe is the quite appalling Help, whose entries are so brief as to be hardly worth including.

Early immaturity apart, Data Plus does a decent job of providing a powerful database for the masses, with most of its power tucked away in reserve for when you need it.

Steve Litchfield

Data Plus

From: 2K Development

Contact: www.2Kdevelopment.com

Price: $45

Quality: ★★★☆☆

Value: ★★★☆☆

AppMan

Version 1.04

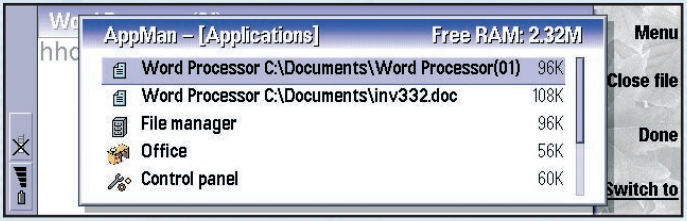
The default Nokia 9200 series communicator interface chooses (probably rightly) to hide most of the multi-tasking power of its Symbian operating system, with a simple list of open documents and running third party applications inserted into the start of every menu bar. Core applications such as Desk, Contacts, Telephone, Messaging, etc. are deliberately excluded, on the grounds that the average user will never need to close these down, once started.

AppMan is unashamedly for the power user, defined in this case as anyone who wants to use the Nokia 9200 range as more than a glorified PIM and messaging device. The moment you open up multiple documents, juggle half a dozen Extras, or try to free up enough execution memory to run a demanding game is the moment you need its help.

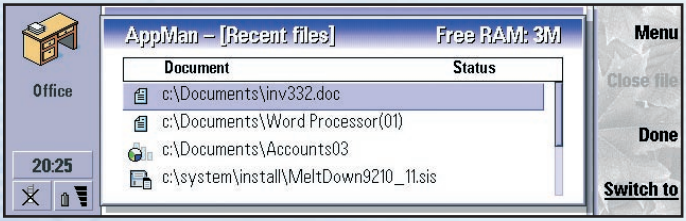
Although AppMan is not the first utility of its kind (see also Task Manager, at *www.psiloc.com*), it's by far the most comprehensive. At its simplest, one hot-key gives you a list of running applications, including the aforementioned core ones, any of which can be cleanly closed down and their memory usage reclaimed. In parallel, a second hot-key brings up an alternative, faster-to-navigate application list that works in much the same way as [Alt]+[Tab] on a Windows PC.

All of this is useful without being unique. A press of the 'Menu' command button though, and you're in the interface from hell. Grit your teeth and browse down the primitive, text-based groups of functions in AppMan's armoury, because there's some good stuff here, most of which can be operated using system-wide shortcuts (once you've worked out what they are).

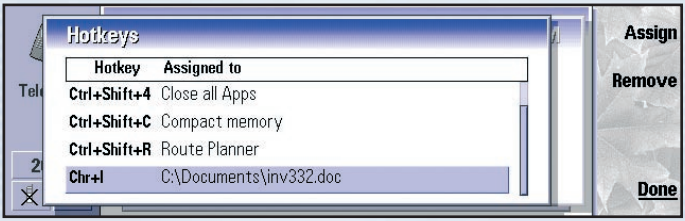
The problem seems to be that AppMan's developers have thrown in some functions here 'just because they can', with detailed lists of running operating system processes, files and threads. While of interest to developers, they mean



The basic Applications display—"Where's my memory going?"

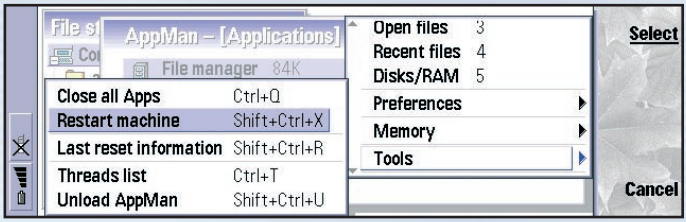


Psion fans will recognise the value of a 'Recent files' list



Setting up a few system-wide 'hotkeys'

A glimpse at AppMan's menu interface and extra functions



nothing to most users, and shouldn't be here—or at least be better hidden.

Ignoring the above, there are some very useful features, many mimicking valuable functions found in older Psion palmtops. There's a 'Recent files' list, the choice of whether document launching should open up a new application instance or simply switch files, and a chance to 'Close all apps' in one fell swoop.

AppMan's remaining treasures centre around improving your use of the Nokia's limited execution memory. There's manual or automatic compaction and defragmentation and, if all else fails, the chance to restart (reboot) the device without having to physically remove the battery.

One final inclusion seems somewhat out of place, but we're not complaining. A 'Hotkeys' section allows you to set up a multitude of user-defined system-wide keystrokes to launch the applications, documents or AppMan functions of your choice.

AppMan throws together a huge number of loosely related utility functions, and it's only a pity that getting to them is so inelegant. Still, get to know your way around AppMan and you'll also know that you're using your communicator's resources to their full capacity.

Steve Litchfield

AppMan

From: SymbianWare

Contact: www.symbianware.com

Price: $15

Quality: ★★★½☆

Value: ★★★★☆

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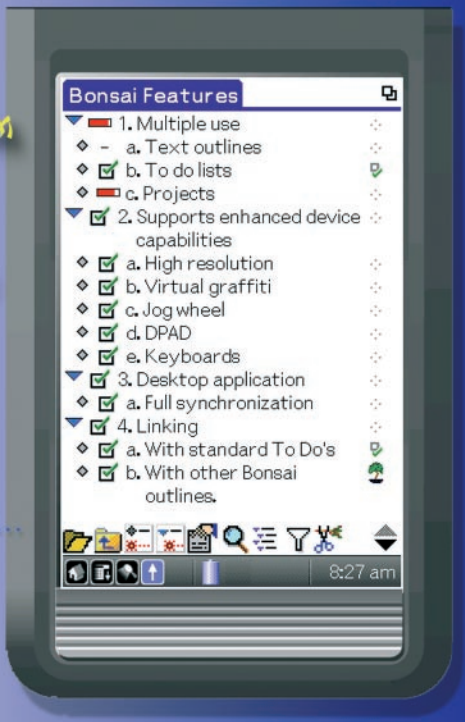

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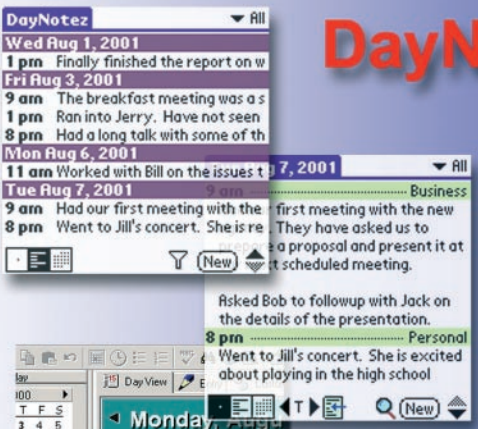

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Managing the day

Is your built-in calendaring software too underpowered? Steve Turczyn and Steve Clack look at the options...

The built-in calendaring functions on handheld devices tend to be rather basic in nature, particularly in the case of Palm OS and Pocket PC. Provision is made for alarms, repeating events and additional notes, but not much more. This is adequate for average users, but frustrated power users may yearn for more sophistication.

For example, there's usually no way to identify or highlight key appointments, or to filter certain types of appointments other than via a text search. There's also no easy way to log or track activity associated with particular contacts or customers, or to have a view of future commitments that includes tasks on your to do list.

Identifying free time on the month display is usually rudimentary—with Pocket PC's Calendar breaking free/used time into just two blocks, for morning or afternoon. Palm OS's Date Book is not much better, showing a morning bar, an afternoon bar, and one for 'lunch' (12-1pm). Furthermore, neither system provides true integration of appointments, contacts and action items.

Fortunately, there are several third party applications for Palm OS and Pocket PC which fill the gap and add a wealth of sophisticated features.

Palm OS

Three fully-featured Date Book replacement applications currently exist for Palm OS, all providing the following enhancements:

- A combined display for appointments and tasks on the day view.
- Icons for appointments and tasks.
- A week view showing the text of appointments.
- Icons shown in the standard block week view.
- An enhanced month view with icons.

- An enhanced month view for identifying free time.
- A multi-month or year view.
- The ability to link appointments and tasks to individual contacts.
- The ability to assign appointments to categories.
- High resolution screen support.

The two most mature products (Agendus and DateBk5) have these additional features:

- Alarms for tasks.
- Repeating and recurring tasks.
- Events that span midnight.
- A selection of unique alarm sounds for individual appointments or tasks.
- Colour selection for appointments or tasks.
- Appointments detailed to the exact minute.

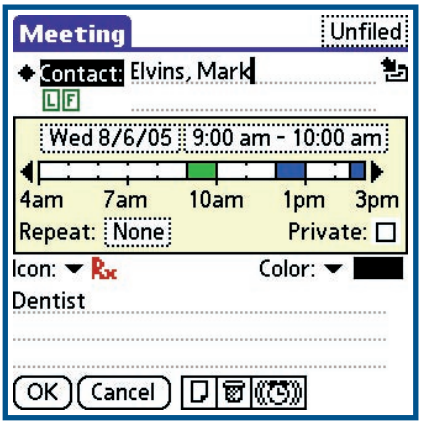
Agendus

Agendus ($25, *www.iambic.com*) is a new name for an established product, Action Names Datebook. Agendus' latest feature is the addition of a Pocket PC-style 'Today' view (it even mimics the Pocket PC icons and nomenclature), summarising your appointments, outstanding tasks and emails (provided you use Agendus in conjunction with iambic's email client). Agendus even lets you add wallpaper to your Today view, so you can have that favourite family snapshot as your background.

Other views unique to Agendus include a month 'clock' view, which works better than the traditional Date Book month view for showing free versus booked time, a clear and useful weekly list view, and access to your email and SMS messages—again, provided you use iambic's own email product.

The appointment add/edit screen is quite useful, with an 11 hour timeline where you can select or slide the time of the current appointment, while showing

Agendus' Pocket PC-style Today view



Agendus' timeline shows free and booked time

you clearly which hours are blocked or free. You can't scroll beyond the 11-hour window when dragging the appointment block, but this is a minor quibble.

Agendus excels at contact management, with an easy mechanism to link items to a contact, the ability to group contacts by any field, quick commands to schedule follow-ups, and quick access to contact history.

Although not as feature-rich as other products, Agendus is an intuitive, easy-to-use product that you can use to its full capability almost immediately. It's also unique in having a desktop companion, Agendus for Windows, fully-synchronized and fully-featured.

DateBk5

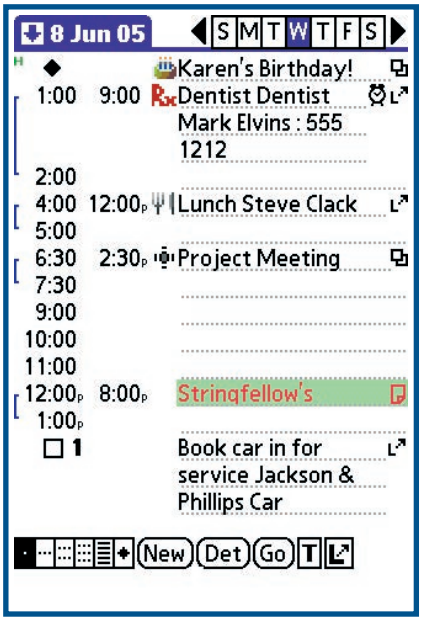
DateBk5 ($25, *www.pimlicosoftware.com*) is probably the most powerful pure Date Book replacement available for any handheld device. Its most powerful feature is its category handling. Although both Agendus and DateMan (below) provide the ability to assign appointments to categories, only DateBk5 uses them to their full potential.

You can filter on categories manually, or even automatically based on day of week or time of day. Unlike traditional Palm OS applications, multiple categories can be selected for concurrent viewing. You can also suppress or enable alarms by categories, and assign fonts, colours and default icons to appointments and to-dos based on their category. In addition, you can save filter settings and other general preferences in a profile for later recall.

Category beaming support has been designed-in to make it easy for a small number of people using DateBk5 to share individual diaries. DateBk5 also provides sophisticated time zone support, letting you assign a specific time zone to an event and providing a way for you to change your device's current time zone while travelling.

A useful feature for those with very busy calendars is the 'free time' month display. Search for the amount of time you need—perhaps a two-hour block—and all suitable days are shown, with the amount of sufficient free time indicated in green or, if insufficient, in red.

DateBk5 also supports 'advance notification'. You can have certain events generate a to-do automatically several



DateBk5's Day view, showing two time zones, icons and highlighted events

days before the event date. So birthdays, for example, can automatically remind you to get a card or gift the week before.

Using templates, DateBk5 lets you enter standardised (common) appointments, including appropriate icon, category and links, with just a few taps. Although not as intuitive as the contact linking in Agendus, that in DateBk5 is more flexible, allowing you to link an appointment to multiple contacts, to-do items, memos or even other appointments.

If you need its features, DateBk5 is unequalled, but it's certainly not as accessible as Agendus, and you may find the 100+ page manual daunting.

DateMan

DateMan ($25, *www.standalone.com*) is a relative newcomer to the scene, but is from a long-established development house. Although a Day view is provided, the default on startup is its useful, if somewhat cluttered, list view.

DateMan's linking facility, shown in list view

To-do and appointment templates can be created for quick entry, and items can be linked to multiple contacts or to one other appointment and one other to-do item. StandAlone's contact management product 'SuperNames' also supports linking to appointments, but unfortunately the two aren't integrated in any way, and links are not created automatically. Category support is provided but, unlike the other Palm OS products here, DateMan requires that you use the existing To Do List categories for both appointments and to-dos. A category can be used to filter items in most views so, for example, you can see all blocked time in a 'vacation' category in your year view.

DateMan has a similar 'clock' month display to Agendus, and we particularly like the way the description of a repeating event is incorporated into the display. We also like the DateMan date picker, which replaces the standard Palm OS date picker in all applications, although this feature is not yet compatible with Palm OS 5. DateMan uses a similar timeline slider to Agendus for selecting times, but it doesn't show other appointments in the day and so its usefulness is limited.

Overall, we like the handling of daily repeating events in month view, and the date picker is an improvement over the system date picker. DateMan lacks the extended to do support—repeats and alarms—that both of its competitors do very well.

Pocket PC

There are two full-featured Calendar/Contacts/Tasks replacement applications currently available for Pocket PC, both of them quite mature. As with the Palm OS equivalents, they use the existing data from the built-in applications and don't disturb your desktop synchronization in any way.

The two products are remarkably similar in operation, and it's obvious that there is quite a 'race' going on between them to become the definitive Pocket PC calendaring solution. Both have been developed extensively in recent months and updates are appearing quite regularly.

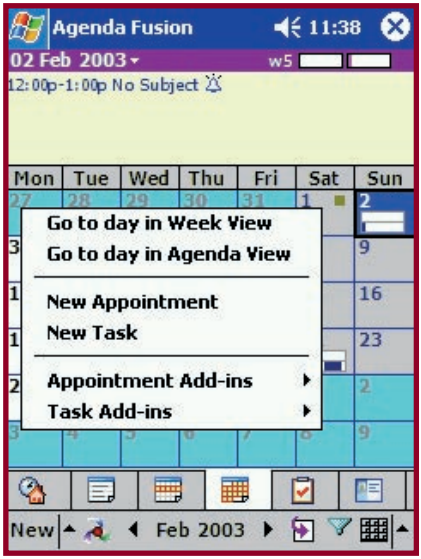
Both offer the following features beyond those built into the standard Pocket PC calendaring applications:

- A combined list-like agenda view, showing all upcoming appointments and tasks for the coming days.
- Category-based icons for appointments and tasks.
- A customizable week view that allows items to be moved by dragging and dropping.
- An enhanced month view for identifying free time.
- The ability to link together appointments, tasks, contacts and notes.
- Creation of 'Alarm notes'—free-form text entries with independent alarms attached.
- Conversion of appointments to tasks and vice versa.
- The ability to assign either lettered or numbered priorities to each task.

Agenda Fusion

Agenda Fusion ($30, *www.developerone.com*) offers perhaps the clearest display options of the two Pocket PC products, supplementing the usual agenda, week and month views with an excellent customizable 'Today' summary view, essentially an enhanced version of Pocket PC's own Today screen.

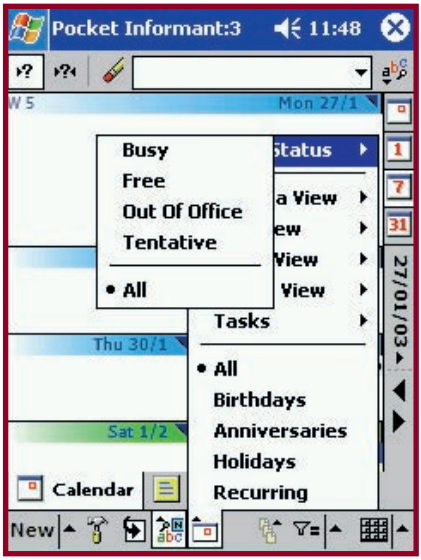
As with Pocket Informant (below), every view is enormously configurable, with full control over fonts, display of icons, advance warning of upcoming events, and so on—so much so that the mass of preference screens can be a little daunting at first. Once set up though, Agenda Fusion is intuitive to use, and generally a little snappier than Pocket Informant in operation, at least in the current version.



Agenda Fusion provides a clean, clear display

Aside from basic calendaring, Agenda Fusion scores highly with its handling of tasks and contacts, with a beautifully clear hierarchical task display that shows to-do items split neatly into categories and makes it easy to rearrange and edit entries. As well as making contact details easier to find via an enhanced search facility, entry of new contacts is made massively easier than in the default Contacts application, by grouping all related fields together in a more logical fashion.

As with Pocket Informant, Agenda Fusion makes comprehensive use of tap-and-hold contextual menus to provide quick access to relevant editing options. In addition, tapping on a phone number enables a DTMF tone dialling facility, though at present there's no support for auto-dialling a mobile phone via infrared or Bluetooth.



Pocket Informant's powerful filtering

In summary, Agenda Fusion offers a huge improvement in flexibility over the built-in Pocket PC software, and works in a clear and intuitive manner that belies its underlying power.

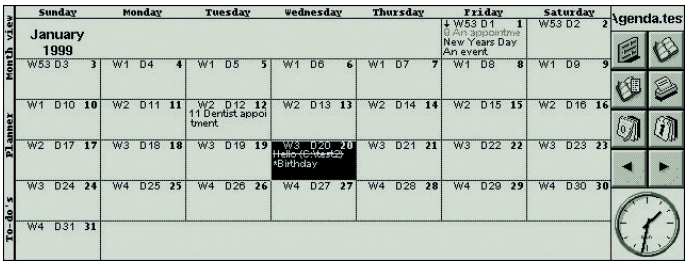
Pocket Informant

Pocket Informant ($25, from *www.pocketinformant.com*) makes use of a 'tabbed' display to switch between its various calendar views, but, by putting the tabs down the right edge of the screen as well as at the bottom, it sometimes results in a slightly cramped-looking display. That small criticism aside, the current version of Pocket Informant offers some useful features that don't appear in Agenda Fusion.

Rather than using a Today view *per se*, Informant opts for a scrollable day view, with a bar display at the top to show allocated time. This can involve a little more navigation than the Today view approach, but gives a better at-a-glance overview of the day's commitments.

Informant allows the dates of both appointments and tasks to be changed *in situ* via a context-sensitive pop-up menu, rather than making it necessary to go into edit mode for each entry. This is a common task when maintaining a calendar and rescheduling events that you've failed to complete at the planned time and, although Agenda Fusion offers this quick option for tasks, its appointments must be edited the long way.

As well as filtering entries by category, Informant makes it easy to filter and show only birthdays, tentative appointments, holidays, and so on—a major benefit when trying to manage a lot



RMRMonth adds a month view and a calendar printing facility

of entries. Also helpful is the ability to search the entire calendar for conflicts, flagging any possible overlaps.

Unique to Pocket Informant is the option to encrypt individual entries with a password, reducing the text to a string of anonymous rectangular boxes until the password is used to decrypt the entry.

With Bluetooth phones now becoming commonplace, it's also good to see Informant's ability to dial contact numbers via Bluetooth (or infrared) rather than solely with DTMF tones. Another excellent feature is that once the call is initiated, the program will optionally jump straight into a note entry for the appropriate contact, ready to add details of the call, all suitably time and date stamped.

Overall, most users will find little to choose between Agenda Fusion and Pocket Informant, especially as they seem to leapfrog each other with every new (often monthly) product update. Pocket Informant currently seems to have the edge in terms of pure features, but Agenda Fusion has a slightly less cluttered and more elegant interface.

Psion/Symbian

There are no full-blown replacement applications for Psion Agenda and its equivalent on the Nokia 9200 series communicators, although a few useful add-ons have appeared (it's important to note that these all have to be launched as standalone applications rather than integrating with the existing software). For Psion handhelds these really centre around adding in the month-to-a-view option that was so notably missing from the built-in software. Of the Psion products that are still available, RMR Software's RMRMonth ($20, from *www.rmrsoft.com*) is perhaps the most useful, with a month view and full calendar printing facilities.

For the Nokia 9200 series, Active Desk ($25, *www.cibenix.com*) provides what is effectively a 'Today' view that shows all upcoming tasks and appointments, and allows direct input of new events via the Active Desk screen.

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En route!

Our editorial team puts some cutting edge GPS navigation solutions to the test – just how practical are they?

Ever since Global Positioning System (GPS) receivers became small enough to carry around comfortably (in the mid 1990s), people have been finding ways of connecting them to handheld computers. The earliest combinations used Psion Series 3 palmtops, closely followed by software on the Psion Series 5 and fledgling PalmPilot handhelds, all still using standard serial cables. These days, most GPS connections to palmtop computers are through direct attachment to a USB or serial port, or to a plug-in 'sled' via a proprietary expansion port. With GPS circuitry getting ever more miniaturised, even receivers that fit on a standard SD, Memory Stick or CompactFlash expansion card.

Although there are a huge number of combinations of handheld computer, cable/adaptor and GPS receiver, picking a few common solutions for extensive testing is still a valuable exercise. It's easy to get carried away by marketing hype and have unrealistic expectations (such as "Never get lost again!"), but try a GPS and navigation system out for real, on a journey where you have to rely on it completely, and you might be as likely to curse the system as praise it.

That said, both GPS hardware and route planning software is improving all the time—just don't throw that map book away yet. We encountered numerous oddities during testing, including being asked to go 30-40 miles in the wrong direction, to enter motorways on police-only service roads, go the wrong way around roundabouts, and being routed up 'buses only' roads.

GPS?

Created and implemented by the US military, the network of 24 GPS satellites has been available for location-fixing to the general public for many years. Until recently though, a deliberate 'wobble' was placed on the signals, to prevent enemies from using the US satellites against them. Now, in relative peacetime, a modern GPS receiver can triangulate the signals from three or more satellites to tell you where you are, anywhere in the world, to within a few metres. There is no 'subscription' or annual fee needed to access GPS data—only a GPS receiver.

Loading the world into your pocket

Mapping and navigation. As with any other field of computer software, there's huge variety in what's available, so it's worthwhile to stop and think about what kind of solution you really need. Most of the programs available will accept input from a GPS receiver, so your decision should mainly revolve around the scope and functionality of the software itself.

From town A to town B

The world of electronic mapping was kickstarted by the famous **Autoroute**, and this is still the type of application that first comes to mind for many users. On almost all handhelds, TomTom's **Route Planner** (*www.tomtom.com*) is comprehensive and works completely 'offline', i.e. all maps and data are stored locally, on your expansion disk. Typically, you'd load up a complete country at a time, choosing a level of road detail appropriate to the disk space you can afford. By modern standards, Route Planner's needs are very modest, with its most detailed map of the UK only taking up around 4MB and covering everything down to 'B' (minor) roads. But it's limited to town-to-town (or village) navigation—you're on your own once you get down to street level.

Or road A to road B?

Although the space requirements for storing every road within a country have until recently been prohibitive (around 100MB), TomTom (again) has pioneered route planning within single cities or regions, with its **CityMaps** (née **Street Planner**) software for all palmtops and handhelds, typically needing less than a megabyte for each major city or area. Within an area you can plan road-to-road routes, but there's typically no support for planning routes onto a neighbouring area, even if you have it loaded.

A simple map?

There are many more mapping products (at least, for Palm OS) if you live in the USA, partly because of the greater availability of low cost street-level mapping data. For example, see **StreetFinder** and **Road Atlas MMC** (*www.handmark.com*), Delorme's **XMap Handheld Street Atlas USA** (*www.delorme.com*) or **Quo Vadis** (*www.marcosoft.com*). Typically, each builds up a fully-zoomable vector road map of the desired area, with some approaching the graphical effectiveness of a good paper map. **Mapopolis** (*www.mapopolis.com*) has a few extra tricks, including optional voice instruction in a Pocket PC version, although its coverage is patchy and relatively expensive.

Where you have a paper map already, ready for scanning, **Atlas** (*www.gpspilot.com*, for Palm OS) or **RealMaps** (*www.realmaps.co.uk*, for Psion) can present (literally) a 'moving map', superimposing a GPS cursor.

TripPilot running on the high resolution screen of the Palm OS Sony Clié NR70

Route Planner on a Pocket PC

But I still need more

Luckily, it's entirely valid at this point to say "But I need all the above, at the same time, and more besides." And with the appearance of large expansion cards and wireless Internet access you can (in theory) have your wish.

For a start, **Maps-on-Line** (yet again from TomTom) is an innovative pay-as-you-go online service for both Pocket PC and Nokia 9200 communicators, planning a route from anywhere in any country to anywhere else in any other country and sending the route instructions and map fragments needed over the air during a normal Internet data call to the TomTom server. We were impressed by the amount of relevant local POI (Point Of Interest) information available for download. Disappointingly, there's only GPS support on the Pocket PC version. **TripPilot** (*www.gpspilot.com*) offers similar wireless functionality for Palm OS handhelds, with full GPS support. These online services mean that all the bulky map data can be stored on the provider's servers, with the time to present maps and route determined solely by the speed of your wireless connection.

Finally, the current state-of-the-art in handheld mapping and navigation is centred on the Pocket PC platform, with TomTom **Navigator** and **NavMan 3400 Voice**, both of which provide full anywhere-to-anywhere routing, moving map display and spoken turn instructions. In the following pages, we look at these and the best of the other solutions already mentioned.

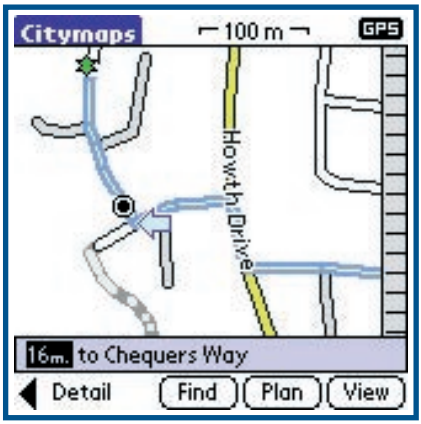
Solution 1: Palm m515 with Magellan GPS Companion

Adding the slightly ungainly GPS Companion sled to a sleek Palm m515 seems heretical, though much is forgiven when you hold the combination in the hand. The GPS is very lightweight, even after the addition of the two AAA batteries. A 12V car lead is provided in the box, which not only saves the AAA cells but also tops up the charge of the m515 at the same time.

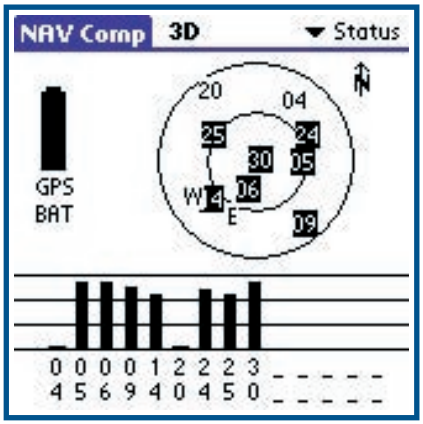
Getting a position fix is very fast, at less than a minute out of the box and only a few seconds thereafter. The GPS Companion's only downside is that it's limited to 4800 baud, which in turn limits position fix updates to every second or so. A lag of a couple of seconds between a GPS fix and the information appearing on the map screen may not sound like much, but your car might travel thirty metres or more in that time, which in an urban environment is often enough to take you just past the junction being aimed for.

Included in the box as the main application is TomTom's ubiquitous CityMaps (Route Planner is also supplied for longer journeys). Although polished as a Palm OS application, and the data's certainly comprehensive and clearly displayed, CityMaps doesn't make best use of the interface available. The Zoom 'bar' in particular is extremely fiddly to operate when on the move, and there are no menu command equivalents. Other than Scroll Up/Down, it's a pity that CityMaps doesn't make use of the Palm's hardware buttons.

Following a wrong turn, recalculating a route from the current position takes a minimum of six stylus taps and (typically) around 10-20 seconds of processing time, during which it's best to park up, in case you go further astray while you're waiting for the recalculated route.



Working along a planned route in CityMaps



The NAV Companion's 'Status' display

Full directions are available for each route, but unfortunately these aren't carried through onto the main GPS-enabled map screen, which merely shows distances and road names. In practice, it's easiest to simply follow the highlighted route on the map (not easy in bright sunlight, as the highlight is in pastel blue and sometimes difficult to make out), with the GPS cursor tracking where you were a few seconds ago.

Magellan also includes 'NAV Companion', a useful utility which offers GPS diagnostics and route/waypoint support. CityMaps' own GPS support is tightly integrated, with a simple check box to turn its GPS features on or off.

Although this solution would have seemed highly desirable a few years ago, GPS software on other platforms now shows TomTom's Palm OS effort to be somewhat half-hearted, though at least the price is right and within everyone's reach.

Magellan GPS Companion (*www.magellangps.com*) costs around £120 including VAT, available in the UK from *www.exportech.co.uk*.

Solution 2: Palm m515 with TripPilot

Interestingly, TripPilot uses much the same hardware as the previous solution but approaches GPS navigation from a different premise altogether. Rather than preloading large areas from CD before setting out, the purchase of TripPilot gives you instant wireless access to every street and location in North America and Europe, with less than a 200K memory hit.

Ideally you'll need a Bluetooth or infrared mobile phone, in addition to a GPS receiver of some description (we used the Magellan GPS Companion, but TripPilot supports all other possibilities). Having kitted yourself out with the appropriate gadgetry, you can plan from anywhere to anywhere else for the cost of a short mobile phone call, typically about five minutes online to grab instructions and map snippets for a specific journey.

Departure and destination points are best taken straight from your Address Book database, simply selecting the appropriate contacts. This is quicker and tends to work better than entering addresses as free-form text. The route planning itself is done on the TripPilot Internet server, and you don't get much say in how the optimum route is worked out. A Preferences dialog does allow tweaking of units used, icons and colours, though your choices only take effect for future TripPilot itineraries, not for those previously downloaded.

Great instructions and intelligent map zoom

Keeping tabs on your GPS fix

Once an itinerary has been downloaded, you're offline and can put away the phone and connect up the GPS instead. TripPilot will work perfectly well without a GPS unit in much the same manner as Maps-on-Line (see page 63), but one strange road looks very much like another, and it's only with GPS input ('You are here') that any of these navigation solutions become genuinely helpful.

Although TripPilot's display can get seriously over-cluttered at times, you can't fault the amount of information on offer. At any given moment in a journey it displays two map segments: the top showing the current 'stage', the bottom showing the one coming up, each cleverly set to zoom levels appropriate to the type of manouevre needed. Textual instructions on the right of the display reinforce the maps, e.g. "Bear right on Shinfield Road, A327, and go 700ft". TripPilot appears a little rough and ready at times on a 160x160 pixel Palm OS display, with roads rarely labelled on the maps and text instructions running into one another.

The GPS integration is well done, with a very welcome diagnostic screen for working out what your 'black-box' GPS receiver is actually doing. The GPS cursor on the map screens is updated every second or so, and clearly shows both position and direction. TripPilot shows a lot of maturity in design throughout, with hardware buttons programmed for the different displays and modes.

The requirement for wireless Internet is not strictly correct, in that it's perfectly possible to plan and download routes while connected to a landline modem before setting off. Just be aware that deviating from the planned route will leave you in no-mans land. At least with a wireless connection you can stop for a cup of coffee and grab yourself a revised itinerary if necessary.

TripPilot (excluding GPS hardware) costs $50, from *www.gpspilot.com*.

Solution 3: Nokia 9210 with Nokia LAM-1 GPS module

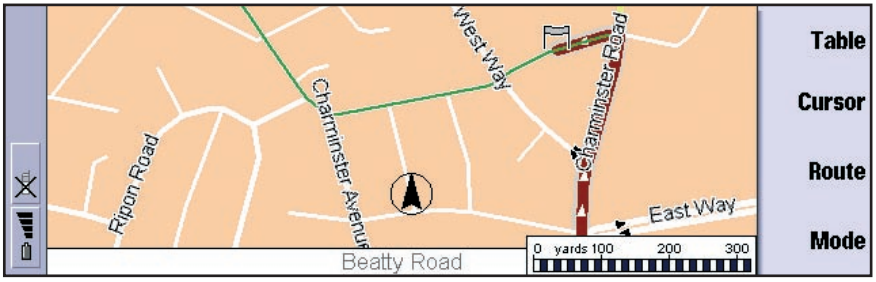
As you'd expect from an 'official' accessory, Nokia's LAM-1 GPS plugs perfectly onto the 9210 communicator's business end and looks the part. Its bottom is shaped to leave access to the 9210's DC power socket so that you can keep the combination powered from a cigarette lighter outlet on long journeys. With both components powered by the 9210's single Li-Ion battery, a full charge on battery power lasts around four hours.

As with most modern GPS receivers, the LAM-1 simply works, achieving its first fix within seconds of being powered up. TomTom is again the software provider, with a Nokia 9210 port of its acclaimed mapping and planning software for the Psion range of palmtops. Again, both CityMaps and Route Planner are provided for installation onto MMC card and, as usual, it's up to you to switch between applications and maps, depending on where you're going and over what distance. The sooner these functions are integrated into a single environment the better.

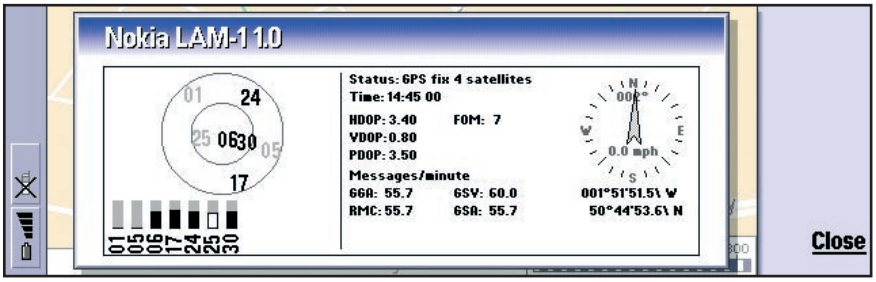
Within an installed region though, CityMaps' route planning engine is excellent, with a wealth of speed settings and road type preferences for up to eight road classifications. A typical cross-town journey takes up to 30 seconds to calculate and, as with the Palm OS version, this delay makes route recalculation after a wrong turning rather tricky. In 30 seconds, you'll travel up to a third of a mile and will then need yet another calculation done, etc., *ad infinitum*.

Route (and general map) display is very clear on the Nokia's bright colour screen, although the 9210's auto-dimming feature means that you'll need to tap a key every now and then to bring the brightness back up, or use a third party utility to keep the display brightness at maximum. The inclusion of 'hard' keys helps a lot, with [I] and [O] zooming in and out and [+] and [-] available to adjust the road detail shown. The 9210's command buttons are well used at each stage to speed things up.

GPS support is comprehensive, with a lovely satellite 'Information' display and numerous preferences. Following a planned route (shown in a distinctive dark red) by matching progress of your GPS cursor on screen is a doddle, although you might want to reduce the time between GPS updates from the default



CityMaps presents both maps and routes very clearly on the 9210



Getting a feel for where the GPS satellites are within a CityMaps display

power-saving seven seconds. A tap of the spacebar superimposes line-by-line route instructions on the main map, but these (rather disappointingly) don't advance automatically as the GPS cursor (and thus the journey) progresses.

Although the LAM-1's asking price is relatively high, it does include an optional (and very welcome) external antenna, and the software bundle is generally impressive. With a little more work by the people at TomTom to optimize the software and bring the maps right up to date (my car is not allowed up bus lanes), this Nokia solution would be nigh-on perfect.

Nokia LAM-1 GPS (*www.nokia.com*) is available at around £240 including VAT, from *www.exportech.co.uk* in the UK.

Solution 4: Compaq iPAQ with TomTom Navigator

On paper, at least, the top two Pocket PC GPS mapping solutions appear to put every other handheld-based package in the shade. Combine an entire country's road network down to street-level detail with spoken voice instructions, and these solutions begin to sound as good as dedicated in-car systems that run from CD and cost thousands of pounds.

The joy of a comprehensive mapping solution of this type *should* be that you leave your paper maps at home, set up the unit and simply listen for the spoken directions to lead you (unerringly) on your way.

Back to earth with a bump, it turns out that the software has great potential but suffers rather from the limited detail within its built-in dataset. Look on any UK Ordnance Survey map and you'll find 'B' (minor) roads logically marked as either 'above 4m in width' or 'below 4m in width'. None of the mapping solutions (for any handheld platform) currently seem to include this kind of crucial detail, resulting in software that can quite easily lead you down a virtually impassable dirt track in order to shave a 'useful' amount of distance off your calculated journey.

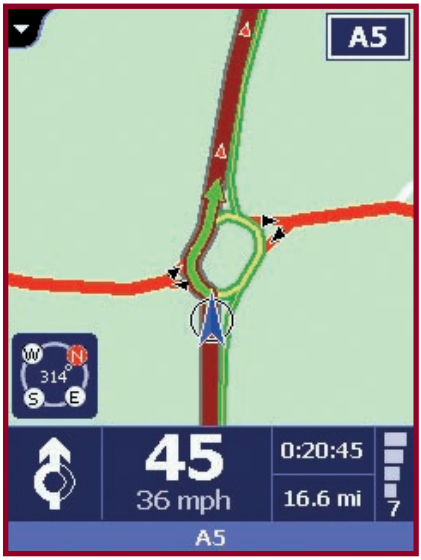
The good news is that TomTom's Navigator is the best option available to date, but the bad news is that in at least one journey in ten you'll probably be sent on a route that's less than optimal.

The Navigator package incorporates TomTom's own GPS receiver, which looks very much like a PC mouse, complete with trailing cable. Also included is a universal mounting system to attach to your dashboard, air vent, fascia, etc., together with a cigarette lighter cable to power both the handheld and GPS unit. Suitable adaptors are currently available for a number of Pocket PC models, including the Compaq/HP iPAQ, O_2 XDA and the Fujitsu Pocket LOOX.

The GPS unit can either be placed near the car windscreen, where we got universally excellent results, or allowed to sit on the roof by threading the cable through the car door seal and relying on the (waterproof) unit's magnetic base for attachment.

The mapping software included uses a similar dataset to TomTom's CityMaps product, except that the entire network for the given country is seamlessly stitched together. A single (European) country is included in the main package, with additional countries purchased separately. The entire UK map weighs in at about 90MB, with France as the largest, at more than 200MB.

Although the data appears *almost* complete, with even tiny entrance roads and lay-bys all present and correct, we did find some anomalies in the course of our 2000 miles or so of testing. Aside from a few small villages being missing from the UK map, a test-trip to Cornwall (in the far South-West of England) was thwarted by almost every local place name being entirely absent. The roads were all there, but the lack of place names made route planning impossible. TomTom is aware of this specific



An auto-scrolling, auto-zooming map

'Safety mode' helps to avoid distractions

problem, but has so far given no date for a proposed fix.

Setting up a route is as simple as choosing your start and destination point (including street names) from a simple setup screen, plugging in the GPS unit and setting off. Directions are spoken in a beautifully smooth and clear female voice, with volume easily adjustable.

Voice directions are supplemented with a well laid out on-screen display, which can be set to follow the route with a centred cursor and an auto-zooming moving map that tracks your route, with 'up' always representing your direction of travel. Alternatively, a 'Map' mode will simply track your route without spoken directions, showing your current position on a North-facing moving map display.

There's plenty of configurability throughout, including the setup of a 'Safety speed', above which the map display is switched to an exceptionally clear summary screen, to help avoid potentially dangerous driver distraction.

TomTom's experience in mapping solutions is evident thoughout, from the excellent GPS unit that usually acquires a signal in around two seconds flat, to the carefully optimized layout of all the software's information screens. The auto-zoom feature works fabulously, adjusting the map scale and the detail it presents based on your current road speed. Spoken directions are similarly logical, with warnings along the lines of "After 500 yards, go left on the roundabout, second exit, then enter the motorway" coming up with more advance warning, the faster you're travelling.

Right from the outset of a journey, the software will give the remaining distance

to travel, remaining journey time (though strangely no ETA), and details of your last/next junction, speed, compass heading and GPS signal details.

You can choose to have Navigator calculate either the 'Shortest' or 'Quickest' route to your destination, both of which generally work well. It's also possible to optimize your route planning by plugging in your own preferred speeds for motorways, A-roads, B-roads, and so on, but changing the defaults by too much tends to slow the route calculation enormously. As an example, a 100 mile journey that would normally be calculated in a very impressive minute-or-so can take 15-20 minutes or more. If trying to do this while on the move, it can sometimes be impossible to calculate the required route, as each time the software completes its calculations, you're so far from your original position that it has to start all over again.

Generally speaking, provided that you stick quite closely to the defaults, Navigator will take you on a rather sensible route, and will give a surprisingly accurate initial estimate of your journey time, sometimes within a few minutes, even at the outset of a long journey.

The fallibility of the limited dataset rears its ugly head with disappointing regularity though. Although it's quite possible to travel hundreds of miles without so much as a glitch, a five mile trip might equally well take you on a seemingly absurd route across a town centre, or a rural journey might take you through a tortuous network of remote country lanes, rather than going via a couple of major roads that turn out to take half the time.

More subtle 'errors' occur on a less regular basis, such as routing you down a tiny service road that runs almost parallel with the correct road, or our semi-humorous experience where Navigator directed us to enter a motorway on a Police-only slip road, requiring a last-minute swerve followed by a 10-mile detour.

On the plus side, if you take a wrong turning or miss an instruction, Navigator will continuously recalculate your route and issue re-optimized directions, as though nothing had happened.

So, is Navigator a worthwhile solution, even with its current limitations? Having tried everything else available, in most cases we'd have to say 'yes'. By keeping a printed map close to hand and taking a little care when responding to instructions, Navigator is still an extremely useful tool. In instances where you're travelling alone through traffic without the benefit of a passenger to give directions and can't pull over to peruse a map, you can be pretty sure that Navigator is a whole lot better than nothing at all. And there will be many trips where the product will steer you correctly at every turn, saving both time and fuel along the way.

Navigator is available from *www.tomtom.com*, at €430, with additional maps at €130-150 each.

Solution 5: Compaq iPAQ with NavMan GPS 3400 Voice

In terms of Software, the NavMan GPS 3400 Voice package is very similar to TomTom's Navigator, but with a rather more generous software bundle that includes around a dozen European countries. The dataset gives a similar level of detail to Navigator, and we found no worrying gaps in NavMan's coverage.

The NavMan hardware takes a different approach, housing the GPS unit (and a useful CF expansion slot) in an oversized expansion jacket that can be used either in-car or while walking—a useful benefit over the car-bound Navigator package. Unlike the Navigator GPS, though, NavMan usually takes a couple of minutes to acquire a signal and, although it worked happily in our test vehicle, the line-of-sight requirement of all GPS receivers might foil its use in some cars, or when placed adjacent to a windscreen heating element.

Although broadly similar to Navigator in terms of its interface, the NavMan software provides no option to input your own preferred road speeds. Not a barrier to acceptable operation in itself, but its 'Shortest route' option takes the idea far too literally, seemingly calculating the very shortest distance between *every* pair of junctions. This tends to provide such circuitous, around-the-houses navigation as to make it all-but unusable. NavMan's 'Quickest route' option is much more usable.

The slow response of the NavMan GPS unit can lead to trouble *en route*, as rapid direction changes (such as at junctions) tends to elicit incorrect instructions, such as telling you to "Take a legal U-turn" when halfway through a simple manoeuvre.

NavMan's screen display shows a handsome palette of pastel colours but doesn't stand up well in use, with too little contrast and some information that's virtually impossible to read while driving. Voice directions aren't quite up to Navigator's standard either, with a rather staccato voice that wouldn't quite go loud enough on our test machine.

Overall, NavMan 3400 Voice has too many flaws to be able to recommend it in its current (version 1.91.0011) form. It is available via *www.navman.com*, at £320 approx. including VAT.

NavMan's information can be hard to read

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The GAME ZONE

The hottest new games on the handheld scene...

All of these games are either new or have been significantly upgraded recently. Although colour screenshots are shown where possible, most games also work in monochrome.

MASTER THIEF (Palm OS)

The 3D Deity game engine has been talked about in the Palm OS community for a while now, but this is the first time it's been seen in public in finished form. Master Thief is a first person shoot-em-up in the same vein as the classic Doom, but it goes quite a bit further, with massive work having gone into its level design and complexity. Your job is to infiltrate a huge industrial complex to steal various items and outwit or dispense with guards, robots, CCTV cameras, sensor laser beams, and more. Along with a typical selection of weapons, you have such subtleties as a lock-pick gadget and night-vision goggles, so there's a lot more going on than simply wading in and blasting everything in sight.

Master Thief's graphics are extraordinary, and you simply won't believe their complexity and frame rate on a typical Palm OS Dragonball processor. If you have a Palm OS 5.0 device with the new ARM processor then things get even faster, with extras such as rotating fans, pools of rippling liquid and transparent windows onto the outside world. Master Thief scales itself down impressively though, remaining playable on older and slower monochrome Palm handhelds.

As with the original Doom on the PC, Master Thief is supplied in full with one mission as freeware, with extra mission packs available for purchase once you're hooked. Any software house which goes down this route has to be *very* sure of the quality and addictiveness of its product and, based on Master Thief, Cascata Games needn't be at all worried. Free, from *www.cascatagames.com*, with extra mission packs (appearing as we went to press) from around $12.

BILLIARDS 4.0 (Palm OS)

Featured here only two issues ago, but it's now been almost totally rewritten, with full support for hi-res screens and dramatically improved ball mechanics. Although presentation is limited to a top-down view, the way the balls spin, bounce and move is uncannily accurate. Just about every aspect of ball motion, table appearance and opponent ability can be tweaked to make sure you're kept entertained and challenged. $20, from *www.megasoft2000.com*.

POCKET AQUARIUM (Palm OS)

It's rare that a computer-hosted 'digital pet' is this well done on a handheld. Pocket Aquarium offers 10 fish in up to eight different aquarium settings, with tools for netting them, dropping fish food and tank-cleaning, the idea being to attend to the fish regularly to keep them swimming happily. The gorgeous renderings mean that you can leave the program on when your handheld is cradled and enjoy your own private desk aquarium. $6, from *www.tatemgames.com*.

NAPALM RACING (Palm OS)

Perhaps one for dedicated car racing fans only, Napalm Racing is visually rather crude, but still well worth a look. The tracks and scenery are unattractively dithered and the cars are relatively simple polygons, but the car handling is configurable and it's a challenge to get all the way round each track without ditching in the (animated) sea or bumping into immovable trackside obstacles. There's plenty of promise here for the future, with a lovely car 'painter', a choice of skill levels and variable opponent numbers, though you'll need to be good to keep up with them. The graphical track editor is very welcome and adds another dimension to the game. Freeware, from *napalm-games.narod.ru/indeng.htm*.

TRAFFIC TILES (Palm OS)

Although a tile-matching game doesn't sound terribly exciting, Traffic Tiles does the best it can, with bonus combinations of traffic-themed tiles, and a countdown timer to give a degree of urgency to the proceedings. In theory, there's a built-in tutorial, though it wouldn't appear for us. Still, a memory-provoking way to while away odd minutes. $2, from *store.yahoo.com/pilotgearsw/kingofthebongo.html*.

PSYCHO PATH (Palm OS)

A friendly little game—your mission is to mow down as many pedestrians as possible, women and children included. Some walkers (not surprisingly) appear reluctant to get run over and do their best to avoid your car, though if you do get them in the end then there's extra points to be scored. Car control is with the stylus and very intuitive, although you're limited to a single level in the trial version. The only mystery is why all road kill ends up green... $10, from *www.handyent.com.*

DYNOMITE (Palm OS)

Fire coloured eggs from your slingshot to form groups of three or more of the same colour to clear the screen and progress to the next level. There are lots of bonus items and score multipliers to watch out for, and two game types, each with three difficulty levels. As with all new Astraware titles, there are hi-res versions included for both Sony Clié and Palm Tungsten. This makes for impressive graphics, though subtle egg colouring can make some objects hard to identify on older, frontlit colour screens, which tend to display rather washed-out colours. $15, from *www.astraware.com.*

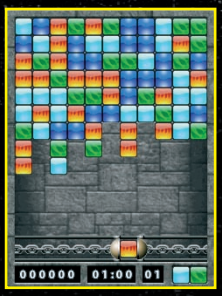
RICOCHET (Palm OS)

Yet another Breakout clone, but with support for standard, Sony Clié and Palm Tungsten colour screens. The graphical richness of the hi-res versions makes for an exceptionally handsome game with all the addictive and frenetic gameplay of the classic original, as you bounce the ball into the wall of bricks, clearing the screen as you go. The option to 'steer' the paddle from left to right with the stylus rather than buttons is a welcome addition. $15, from *www.astraware.com.*

BOOKWORM (Palm OS/Pocket PC)

Immediately impressive, with a tiny learning curve and yet almost infinite playability. Link letters across Bookworm's grid to form words and the letters disappear, with others falling into the gaps left behind. In addition to testing your word power (with long words being scored higher than short ones), there are elements of strategy as you enter words in the right order to get tricky letters paired up with likely partners. The pressure is kept up with extras such as bonus words, and fiery letters that have to be used before they reach the bottom of the screen, to avoid a library fire that will terminate the game. $15, from *www.astraware.com.*

SUPER ELEMENTAL (Pocket PC)



Despite its strange sounding name, Super Elemental is a great puzzle game that will appeal particularly to Tetris fans. Sporting neat graphics with various backdrops and sound effects, the object of Super Elemental is to survive the advancing elements (ice, fire, water and earth) as they drop down. The gameplay is certainly addictive, and requires good hand-to-eye coordination if you are to successfully progress through the levels. $15, from *www.4pockets.com*.

CRYSTAL CALIBURN (Pocket PC)

Pinball games are not new to the Pocket PC platform, but Crystal Caliburn is certainly one of the best to date. Designed to mimic a 1980s arcade-style pinball table, the game is both fast and feature-rich. You can configure your Pocket PC buttons to suit your individual preferences, and the game authors have included a great scoring system, good sound effects, excellent graphics and very realistic ball movement, all of which help make this a fun game to play. $15, from *www.cecraft.com*.

CROPPED OUT (Pocket PC)

Yet another arcade puzzle game for the Pocket PC, its colourful graphics, sound effects and fast gameplay make it both entertaining and addictive. The object of the game is to gain points by creating a line of at least three identical symbols (horizontally, vertically or diagonally) and, when achieved, they explode loudly with slick animated effects. A nice touch is the battery status monitor included on the menu bar. $15, from *www.clickgamer.com*.

STRATEGIC ASSAULT (Pocket PC)

Similar to the excellent No Man's Land for Psion, this realistic battle simulation has you building up forces from limited resources in order to capture strategic locations and defeat the similarly-equipped enemy. Unit types include various tanks, missile launchers, helicopters, jeeps, APCs, gunboats and hovercraft. Easy to learn, but it can be immensely engrossing, with 15 challenging missions included and 15 more available via a $5 expansion pack. Subtle colouring and rather tiny text make the interface a little hard on the eyes, but otherwise a gem of a strategy game at a bargain price. $6, from *www.xengames.com*.

MINI-JETFIGHT (Pocket PC)

An ambitious modern-day dogfight simulation that boasts impressive 3-D graphics and a variety of technically accurate jet fighter armaments. Choose from five aircraft types and nine scenery options, then head for the skies. Track your quarry on radar, lock onto the target with suitable weaponry and try to dodge incoming threats to avoid being shot down. There's quite a lot to learn, but once mastered it's an impressive simulation that works surprisingly well on the small screen. $20, from *www.omnigsoft.com*.

MONOPOLY (Pocket PC)

An impressively full-featured port that offers similar gameplay to the Palm OS version released last year, with a maximum of four players—either human or computer opponents. To simplify interaction, tapping on almost any screen element brings up suitable information and play options. Monopoly uses its own quirky menu system rather than the Pocket PC standard, but otherwise there's little to fault. $30, from *www.handmark.com*. (Currently licensed for USA/Canada only).

AGE OF EMPIRES (Pocket PC)

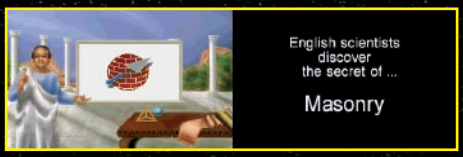
Quite the most ambitious strategy wargame-style simulation to appear on any handheld computer to date, based on Age of Empires and Rise of Rome on the PC (but without the multi-player support). The game features fabulously detailed 3-D graphics and allows you to create an ancient civilization, collecting resources, building, fighting and using diplomacy along the way. It takes 10MB of free memory to run and up to 15MB or so of storage space, but for strategy game fans it's an absolute must. $30, from *www.ziosoft.com*.

SILVERBALL (Nokia 92xx)

The latest in a popular genre, SilverBall is a Breakout clone with all the bells and whistles of other advanced versions. As the ball is bounced into the stacks of bricks, special features drop and must be captured or avoided. Some increase or decrease the bat size, others equip your bat with a laser to shoot the bricks, enable the ball to triple in speed, or paint its way through bricks without bouncing. Interestingly, SilverBall is one of several ultra-glossy games running under the new Magic Game Station 'engine'. $20, from *www.handango.com*.

MOBILE CIVILIZATION

(Nokia 92xx)



Apart from bearing all the hallmarks of a port from another platform, such as lack of command button support and non-standard menu implementation, Mobile Civilization appears thorough, complete and attractive. Starting from scratch with nothing more than a few people in mud huts, every element of a civilization can be built up, from culture to industry to military might. Up to eight computer-controlled opponent civilizations are also around in your virtual world, destined to one day get in your way. The sheer quantity of cut-scenes and graphic elements, not to mention sound samples, mean that you'll need around 4MB free on your MMC card, though this pales into comparison with the amount of your time it will occupy while you get to grips with Civilization's subtleties and start developing your own culture. As with any complex strategy game though, half the fun's in the learning. $20, from *www.redshift.hu*.

FAIRWAY (Nokia 92xx)

One of the oldest Symbian classics comes to the Nokia 9200 series, with a colour port of 3-Lib's Fairway golf simulation. Although not as attractive as Nokia's own Gadget Golf, Fairway has far more challenging gameplay and better 3D mechanics and perspectives. In particular, you'll have to battle both wind direction and green breaks to break par. Scorecards and leaderboards appear between holes for the current tournament, though these and other settings can be turned off in Fairway's Preferences. Unlike Gadget Golf, there are no restrictions in the shareware version and unlike many 9210 games, it needs very little free memory to work. £12, from *3lib.ukonline.co.uk*.

MELTDOWN (Nokia 7650)

Following from Wildpalm's frenetic 9210 port of the classic Doom and its own similarly-themed sequel, the latter finds its way onto Series 60 smartphones. Meltdown for the Nokia 7650 sees you tracking down fuel capsules and avoiding robot guards in a bid to disable and destroy the enemy reactor complex. The first five levels (of 20) are available in the trial version, with the usual mix of labyrinthine corridors, control panels, and secret doors and areas. Meltdown's graphics and sound are very impressive throughout, with the levels themselves already tried and tested in the 9210 version. $10, from *www.wildpalm.co.uk*.

An introduction to GPRS

Steve Litchfield explains what to expect from this 'always on' wireless technology

You've probably seen the claims of mobile network providers (Vodafone, O_2, Orange, etc.) in ads and on web sites. Upgrading your handheld hardware to use GPRS (General Packet Radio Service) is supposed to provide high speed, 'always on' Internet access wherever you are, and there's rarely much talk of the extra costs involved. There's no doubting that using GPRS can give you virtually instant Internet access but, at present, 'high speed' can in practice mean an average bandwidth of less than 1K of data per second at worst case, and using your 'always on' connection may add £30 or more a month to your existing mobile phone bill.

Suitable hardware

As well as dedicated communicators with GPRS built-in (such as the Nokia 7650, O_2 XDA and Handspring Treo), it's possible to connect most Psion, Palm OS and Pocket PC PDAs to a GPRS-enabled standalone mobile phone (such as the Nokia 6310/6310i or Ericsson T39/T68), via cable, Bluetooth or infrared. To set up all the necessary connection settings on your handheld, search for "GPRS" on your phone service provider's web site, and/or visit *www.gprshelp.co.uk*, which offers some excellent advice.

What's different?

As with any technology, it's important to understand enough about it to be able to make informed buying decisions and to work around any limitations. When you dial up an Internet Service Provider (ISP) using your existing GSM mobile phone, a dedicated 'circuit' is set up for your sole use, just like when making a voice call. You pay for the duration of the call, and for data the speed is usually limited to 9.6kbps or 14.4kbps, which equates to a download rate of just over 1K per second.

GPRS does things very differently, in theory making more efficient use of the mobile network's resources. Just as

with the Internet itself, data is parcelled up into small packets, sent off across up to eight 'time slots' present on your provider's network, reassembled at the other end and finally passed on to the Internet-at-large via your provider's own gateway. In effect, then, your mobile network provider becomes your ISP. You don't have sole use of the eight GPRS slots, but potentially share each one in each mobile cell with hundreds of other GPRS users and their mobile devices.

Speed issues

The theoretical maximum bandwidth for an imaginary GPRS device having sole use of all eight time slots on a network and without any error protection is 171.2kbps—almost a megabyte a minute. This impressive figure is cut down somewhat by a number of other 'bottleneck' factors. Firstly, as with any other computer data system, there's a significant degree of overhead needed for error checking, to detect any scrambling of data in transit, and then to automatically handle its resending.

Secondly, current GPRS-enabled phones and communicators are usually designed to use a reduced number of slots. For example, the O_2 XDA (reviewed in issue 2) is limited to accessing four GPRS network slots for download and one for upload. The Nokia 6310i and 7650 smartphones can make use of three slots for download, while the Handspring Treo 270 (see issue 1) is restricted to just two slots for download, which works out as a practical maximum of around 28.8kbps.

Establishing a GPRS connection on an O_2 XDA

Thirdly, it's all very well having large amounts of Internet data flooding into a device, but it then has to be decoded and rendered. One reason for the modest GPRS specification of the Handspring Treo is that its processor speed of only 33MHz, while fine for general Palm OS duties, would struggle to handle the data rates that (for example) the O_2 XDA Pocket PC is specified for.

Finally, having to share the GPRS network's bandwidth (within your local 'cells') with many other users can slow things down significantly. In mobile-saturated cities in office hours, you'll be lucky to get enough network time to achieve 1K of download per second, the same speed as for a standard dial-up data call over GSM. It all depends where you live and what you're using. A GPRS user in a semi-rural area with an XDA should get 5K per second easily.

Setting up GPRS Internet access on a Handspring Treo

Online with Blazer, note the signal/network indicator at the bottom of the screen

Instant access

Of course, provisos over network and device bandwidth aside, GPRS's main advantage is that once connected to your provider's network you're always online. Whereas a dial-up data session typically takes about 30 seconds before you're properly connected, initial GPRS access to the Internet is virtually instantaneous. Removing the 30 second delay might seem like a trivial improvement, but in reality it changes the whole way you use the Internet on your handheld or communicator.

Looking up an acronym or specification, checking a stock price or checking your POP3 mailbox can all be done on a whim. With a dial-up connection, the thought of waiting for 30 seconds to connect each time is usually enough to make you save the query for later.

Typical costs

Because there's no fixed call 'duration' with GPRS, a different way of charging had to be found by the mobile network providers, one based on the amount of data you send and receive. At the time of writing there are dozens of different tariffs and schemes, most based around a monthly charge for a certain amount of bandwidth and then a surcharge per megabyte thereafter. For example, Vodafone GPRS 15 costs £30 a month and covers you up to 15MB of information. After that, it's around £2 per megabyte. Although quite expensive at the moment, these tariffs are sure to become cheaper in the future.

As an illustration of what these bandwidth figures mean in practical terms, we browsed around the web for 15 minutes using the AvantGo proxy-based browser on a Treo 270 and managed to clock up 450K. On the above-mentioned GPRS plan, this would be 3% of the allowed monthly bandwidth. If the allowance had

already been used, this extra browsing session would have cost around £0.50.

Although GPRS charges are on top of your usual GSM mobile bill, don't forget that you won't be making GSM data calls any more, so this component of your bill should be lower than usual.

Keeping it lean

The fact of being charged 'by the byte' means that it's a good idea to use some kind of strategy for keeping page download sizes down. A proxy-based browser such as AvantGo or Blazer (running under Palm OS) makes enormous sense, with powerful computers elsewhere in the world taking the brunt of the download burden, and only squirting across just the text and image data your handheld really needs. Pocket PC and Symbian users are rather out of luck here, having to download pages in their entirety, complete with Javascript widgets, over-size images, etc.

If all else fails, it's quite practical to keep mainly within the so-called 'mobile web', where pages are designed for handheld or smartphone viewing and are very quick and cheap to download. A good place to start is *www.google.com/palm*, a generic PDA-optimized version of the famous search engine, and an excellent candidate for your handheld or communicator's 'home' page.

Points to note

Using email over GPRS becomes slightly more immediate, in that you can check the contents of your POP3 mailbox fairly quickly and at fairly low cost. If you have a corporate IMAP4 mail system then 'push' email becomes possible, allowing you to receive messages almost as soon as they arrive at your server.

Although the power requirements of being online all the time with GPRS are far, far lower than when making a dedicated dial-up GSM call, you *will* notice an impact on battery life.

Note that even though a smartphone or communicator can be online all the time, voice calls can still be received as usual. Think of the GPRS connection as being a mass of SMS text messages flowing around the network and 'suspended' when a voice call is in progress. After answering (or making) a voice call, your GPRS connection resumes smoothly, starting with data your software requested (just before the call), finally being received and dealt with.

Do your homework

The costs of upgrading to a GPRS-equipped communicator or smartphone and then using a GPRS connection day-to-day shouldn't be underestimated. If you can justify them, then go ahead. For the rest of us, it should be borne in mind that even GPRS is a stop-gap solution ('2.5G') until proper high-speed wireless networks ('3G') become a reality. Consider your requirements and the platform and software you intend to use, and then compare the costs with those for standard dial-up access using a humble GSM data connection.

Thanks to Vodafone UK for its help in making this article possible.

Moving DATA

Switching platforms or sharing data with other PDA users? Pete Sipple looks at options for transferring your data between handhelds

Data is of course the most important aspect of a PDA. My own paper address book and diary were phased out somewhere in the 1980s, since when I've migrated from an 8K credit card-sized 'databank', through most of the Psion range, Palm OS handhelds, a Pocket PC and a Symbian OS smartphone. And as soon as the next breakthrough in handheld computing comes along, I'll be happy to move my electronic life once again. Importantly, I've never had to retype my all-important contacts information into a new format on a new computer, thanks to the methods and tools available for converting and transferring data.

If you're considering switching to another device, this article should provide some of the basic information you'll need to make the transfer as painless as possible. With so many different handhelds on the market today we can't possibly hope to cover every combination of file type for every PDA, but hopefully the techniques and links presented here will get you on the right track.

The PC link

To do any serious amount of data copying/synchronizing/converting, you'll ideally need the services of a PC connected to your handheld via cable or wireless connection, and appropriate connectivity software:

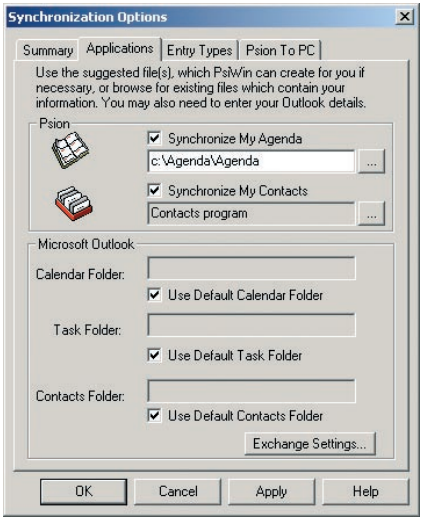
Psion/Symbian OS

Psion palmtops were shipped with PsiWin, and smartphones from Nokia come with a broadly similar product, PC Suite. These allow you to synchronize your Contacts, Agenda and To-do list with Microsoft Outlook, Lotus Organizer and Microsoft Schedule+. They are also used to back up your device to the PC and perform file conversion.

Unusually, the software supplied with the Nokia 7650 supports direct import of Palm OS data, making transfers easy.

Pocket PC

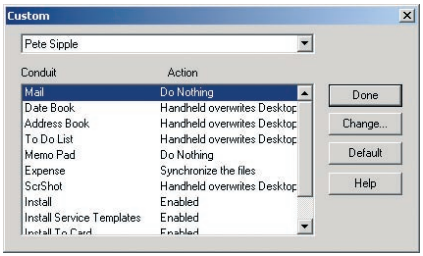
Microsoft's ActiveSync supports synchronization of Contacts, Calendar, Tasks and Notes with Outlook, plus (lossy) document 'conversion' of Excel, Word and Access files.



PsiWin synchronization options on a Psion

Palm OS

Your main options are the proprietary Palm Desktop or Outlook synchronization using PocketMirror or IntelliSync, one of which is included with most Palm OS handhelds. At HotSync time, your Date Book, Address Book, To Do List and Memo Pad data are all synchronized with the appropriate PC PIM (Personal Information Manager) application.

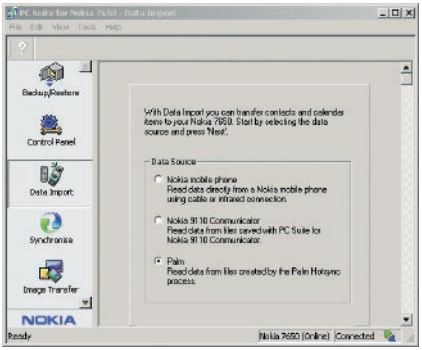


Palm OS HotSync configuration

Pocket PC ActiveSync in progress

Data synchronization

Firstly, note that 'synchronization' is not the same as copying or converting data. It merely means that records with your personal data on your handheld, most commonly your contacts, diary and to-do list, are compared with (and their contents copied to) equivalent records in your chosen PC-based PIM. Keeping your PIMs in sync ensures that you have the correct contact details and appointments with you whether at your desk or on the move.



Synchronizing Palm data onto a Nokia 7650

The easiest way to get your PIM data converted from one PDA type to another is to sync your existing PDA with, say, Microsoft Outlook, and then sync the new device to this. Unless your data started life in a very unstructured way, using synchronization with a desktop PIM is usually the simplest solution.

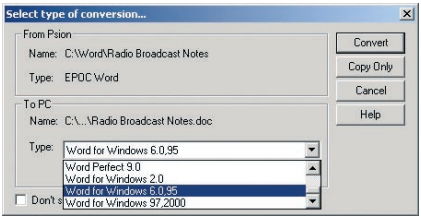
Document conversion

This is normally achieved from the PC end, using drag-and-drop (copy-and-convert) between different Explorer windows. When it comes to file conversion, there are a few general points to be aware of:

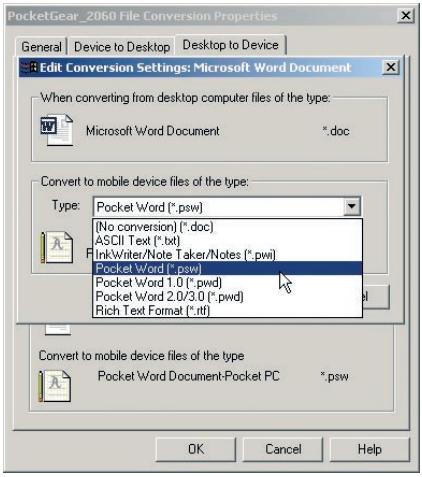
- With so many different types of file formats around, it's possible that you won't be able to find a convertor for the exact format you need, especially if you don't use mainstream software (e.g. Microsoft Office). In these cases, a little trial-and-error is required, dropping back to 'lowest common denominator' formats instead (e.g. 'Word 95').
- With the notable exception of Documents To Go for Palm OS handhelds, document conversion is often far from perfect. For example, most word processor file convertors don't support advanced document layouts, complex formatting features or embedded objects.
- The range of files that can be converted by Pocket PC's ActiveSync depends on what convertors exist on your PC and handheld device. To alter your conversion settings, go to ActiveSync's 'Options | Rules | Conversion settings' and select either the 'Desktop to Device' or 'Device to Desktop' tab. Then choose the file format that you'd like to convert and click on the 'Edit' button.
- In addition to the supplied, and sometimes imperfect, file convertors, note that there are several third-party convertors available (see text).

Common file types

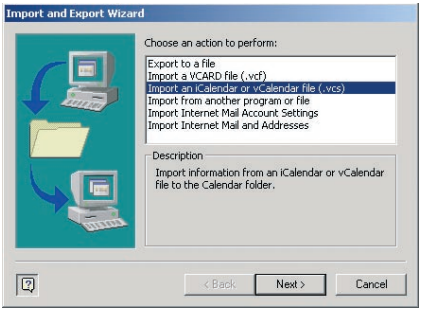
In an attempt to make document conversion possible between different applications and computing platforms, a few generic, industry-standard file formats



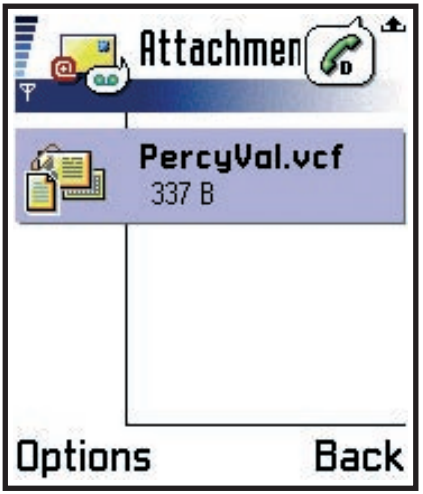
Microsoft Word conversion with PsiWin



Changing Pocket PC file conversion options



Importing into Microsoft Outlook



A vCard received on a Nokia 7650

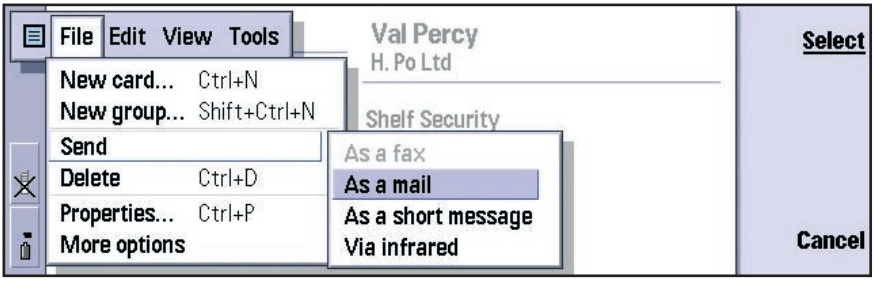
have sprung up over the years. These can be a major help when trying to convert files:

- **Delimited files**. Most commonly, these come in the form of comma (.csv) or tab-delimited files, meaning that the information from each field in a database or spreadsheet is separated by the specified 'delimiter' character. Use of delimited files for importing and exporting data is fairly standard, but there are a couple of potential pitfalls. Watch out when using comma-delimited files if the source data already contains commas, as the data in the fields will become jumbled. The solution is to either switch to tab-delimited, assuming the data doesn't include tab characters, or enclose each field in double-quotes, assuming the data doesn't use these either. If your original data contiains all the above, then the only option is to use a different delimiter character, which some (but not all) programs allow. Don't decide on the exact delimited form to use until you've had a good look at your data's text content.
- **vCal** is the standard for exchanging calendar information (appointments and tasks) and is supported by most

Delimiters?

Here are some examples of what typical delimited text might look like:

- "this is","a csv file","with double-quote qualifier"
- this is,a csv file,with no double-quote qualifier
- this is a tab delimited file → with no qualifier



Sending a vCard from a Nokia 9210

handheld devices, in addition to most desktop PIM programs. Most typically this is used when beaming calendar entries to other devices, but they can also be created as a file that can be sent as an email attachment. Recognised by the file extension '.vcs'.

- **vCard** is also an industry standard format, this time for the exchange of contact information or beamed business cards. In standalone file form, these have a '.vcf' extension. Most PIM software supports the import of both vCard and vCal entries.
- **Rich Text Format (.rtf)** - virtually all word processing packages allow opening and saving of RTF files, retaining most of a document's formatting, such as alignment and text emphases.
- **Plain text (.txt)** - the last resort for getting data from any application, plain text retains no formatting, with the exception of simple tabs and line breaks. The upside is that most applications offer support for the import and export of plain text, and you can always cut-and-paste plain text directly into other applications.

Contacts (address books)

As mentioned above, moving contact data from one handheld device to another is best achieved by synchronizing via a desktop PIM. Provided you have stuck fairly closely to the specified field names, your data should appear in the right address book fields on the new handheld/platform. The synchronization process will typically involve some 'mapping' to massage the data into exactly the right fields, but sometimes this isn't possible. For example, Microsoft Outlook supports 'Anniversary' and 'Category' fields, which don't exist on the appropriate Palm OS or Symbian applications. Conversely, some Symbian OS and Palm OS PIM applications support contact photos, which in turn aren't supported by Outlook. In these cases, you'll find that the information either won't transfer at all, or will end up in an unexpected field.

Note that Palm Desktop supports import of various flavours of delimited text.

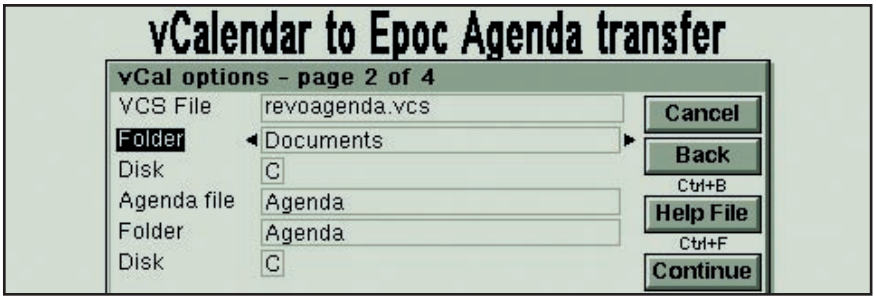
Users of old Psion Series 3a, 3c and Series 5 (not 5mx) palmtops will have contact information stored in Data, a freeform database. See below, under 'Databases'. Psion Series 5mx and Revo

users can convert a Series 5 database into the newer Contacts format using a freeware utility, DataContact, available from *pnicolas.epocboulevard.com*. If needed, C2F (Contacts to File, from *www.freepoc.org*) is available to export Contacts data into a comma or tab-delimited text file.

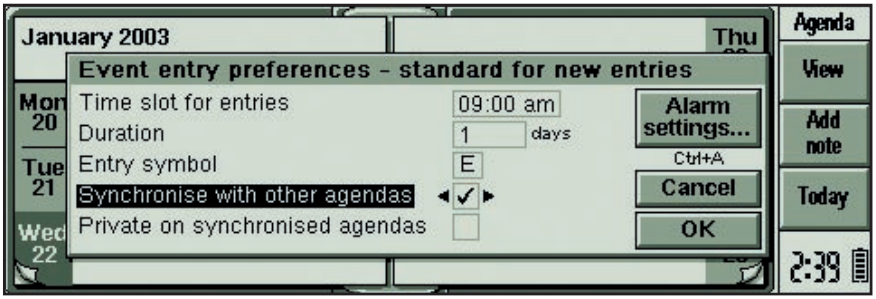
Calendar

Again, getting your diary/appointments converted for use on a new device is best achieved via desktop synchronization. When synchronizing your calendar, most of the sync solutions ask you to specify a date range. By default, this will normally be for a relatively short period of time, but if you want to extract your entire diary then be sure to set the widest date range possible, to catch all entries. Again, some field mapping is necessary (the desktop software will help you through this process), as some PDAs don't support fields such as 'meeting location' and 'category'.

- Psion users should pay heed to Agenda's 'Tools | Entry preferences' settings and make sure that each entry type has the 'Synchronize with other agendas' box ticked. Similarly, Symbian OS's Calendar entries have a 'Status | Synchronization' setting which needs to be checked.
- Don't neglect the possibility of beaming vCal entries between PDAs.



Exporting Psion Agenda entries to a vCal file



Check those synchronization settings...

- Palm OS users can export individual Date Book entries as vCal files from Palm Desktop.
- Psion and Symbian users can directly import and export their entries in the vCal format in bulk, using vCal from *www.freepoc.org*. There are some limitations though: alarms aren't handled and there are some caveats when importing/exporting certain repeated entries.

To-do entries

Again, tasks and to-do lists can usually be synchronized to other devices via Microsoft Outlook, although alarm, priority and category information may not survive the transfer.

- Psion users - as with Calendar (above), check the 'Synchronize with other agendas' setting.
- Palm Desktop can import comma and tab-delimited task lists.

Word documents

The ability to read and create word processed documents is a key requirement for many users. Microsoft Word format is universal these days, and the ability to take Word documents with you can be a lifeline.

- Psion's EPOC Word application supports import and export of plain text files only, but PsiWin can do a passable conversion between EPOC Word and most desktop word processor formats, though it loses some formatting, structure and objects from your original document.
- Most Palm OS handhelds now come with word processing software on CD, such as the excellent Documents To Go, WordSmith or Quickword, all of which have their own conversion conduits that take care to minimise unwanted changes in converted documents.
- Pocket Word on Pocket PC can directly handle documents and templates in its own format (.psw and .pwd), plain text, RTF and various version of Word (.doc), although there's massive loss of desktop document style, formatting and content. ActiveSync also includes support for Inkwriter/Note Taker/Notes (.pwi) files.
- The new TextMaker word processor for Pocket PC (see page 44) provides exceptionally accurate conversion of Microsoft Word and RTF documents, preserving even complex formatting when converting in either direction.
- The Nokia 9210's Word application can open most files, including those in Microsoft Word format (from 6.0 to Word 2000), with similar caveats to Psion Word above.

Spreadsheets

- Psion users are hampered when away from the desktop by Sheet's inability to import or export delimited text files, but third-party solutions are available (see below) and, when back at the desktop, PsiWin does a fairly good job of handling conversion between Microsoft Excel (.xls), Lotus 123, Quattro Pro and Microsoft Works for Windows spreadsheet formats. Nokia 9210 Sheet users are

Exporting a Psion database as a tab-delimited file

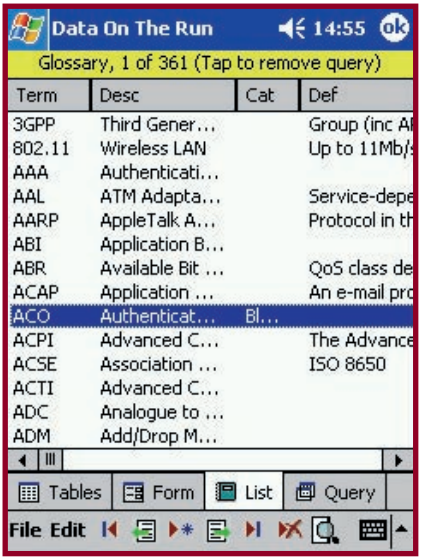
somewhat more self-contained when mobile, with (rather poor) onboard Excel convertors.

- Palm OS users again get fairly seamless synchronization of their spreadsheets, via desktop conduits for Documents To Go, Quicksheet, TinySheet, etc.
- Pocket Excel on Pocket PCs allows documents to be saved into a variety of desktop Excel formats for direct transmission via email, etc. When working via the desktop, ActiveSync will perform the necessary conversion to and from Pocket Excel format. In both cases, expect to lose any advanced formatting from desktop originals, together with all charting information.

Databases

Although Palm OS is based around a dedicated database format (.pdb files) and Pocket PC's ActiveSync supports Pocket Access, it's (surprisingly) only the older Psion palmtops that come with a built-in database application as standard.

- The Psion Data application imports and exports delimited files of all kinds. There are also third-party applications available to convert Data files into Contacts format (see 'Contacts' above), and PsiWin can handle conversion of CSV, Microsoft Access, dBase and FoxPro databases.
- Palm OS handhelds are starting to come with bundled database software, (e.g. MobileDB from *www.handmark.com* with the Tungsten T), but there are plenty of other options, including HanDBase (see our series on page 95).
- Pocket PC users have two options: to go for a third-party database application (several are available, including HanDBase once again) or to convert data into spreadsheet format for working in Pocket Excel. The ActiveSync option to convert databases into Pocket Access format (.cdb) is very confusing, especially as there's no such application supplied with Pocket PCs. There are third-party Pocket Access viewers available however, such as Data on the Run (*www.biohazardsoftware.com*).



An Access database under 'Data on the Run'

- Symbian OS users also have to look to third-party database applications. For example, see Data Plus, on page 48.

Notes and Jotter entries

- Psion Jotter files can be converted to HTML, RTF or Word by the general conversion package nConvert (*www.neuon.com*).
- Pocket PCs accept Notes beamed from other devices, converting them into text files.

Handheld-to-handheld

For those instances where it's impractical to use a desktop PC as the intermediary, there are a number of third-party applications to allow beaming of a limited range of document formats directly between different handheld types.

Other links

- Intellisync (*www.pumatech.com*) has data synchronization solutions for Palm, Pocket PC and Symbian OS handheld devices to the following desktop formats: Microsoft Exchange, Outlook, Outlook Express and Schedule+, as well as Lotus Notes and Lotus Organiser. It's also the solution used by Microsoft for Calendar synchronization over the Internet with Microsoft's MSN.
- Palm OS owners who haven't already got a copy of Documents To Go can find out more at *www.dataviz.com*.
- Eric Lindsay's guide to Psion synchronization and conversion is a useful resource: see *www.ericlindsay.com/epoc/sisync5.htm*.
- The FileSaveAs web site contains information on converting data types not covered here, including sound and image formats, and has a forum for discussion of conversion problems. *www.filesaveas.com/pdaconvert.html*.
- If you really can't face converting all of your data from one handheld format to another, POS Ltd (among others) offers a data conversion service. See *www.posltd.com*.

- Psion users will find Neuon's excellent nConvert (see above) an enormous help when exchanging files with other handheld types. It provides conversion between most native Psion formats and their desktop equivalents, and can even convert whole batches of files together.
- For transmitting Psion-based files via infrared, plBeam (*www.psiloc.com*) replaces the built-in infrared driver to allow the infrared process to work with a wider range of file types and non-Psion computers.
- Pocket PC users can get similar infrared functionality from Peacemaker Pro (*www.conduits.com*) or mBeam (*www.mobem.com*).
- Probably the most powerful handheld-to-handheld solution, SyncTalk Professional (*www.synctalk.com*) is designed to allow a wide variety of files to be transferred between PDA/smartphone formats via infrared. It also supports transfer via infrared-enabled PC laptops.

Non-PC computers

If you're using a non-PC computer, such as Macintosh or Linux, many of the points in this article are equally applicable, except you'll find that most conduits and convertors for Psion, Symbian and Palm OS-based data are only available for Windows PCs.

- By using Virtual PC on the Macintosh (*www.connectix.com*), you'll gain full access to all the conversion options available on a 'real' PC. If you need to transfer PIM entries from one handheld type to another, this may be the most effective option, as Psion and Symbian devices aren't compatible with any Macintosh PIMs.
- Most major PC desktop formats are supported natively by Apple Macintosh computers, including Microsoft Word and Excel (though not Microsoft Access), RTF, HTML, vCard, vCal, delimited text, etc. If you can get the necessary handheld files to and from your Mac desktop in a supported format (perhaps sending the files as email attachments if necessary) then you should be able to work effectively.
- For Pocket PC users, PocketMac (*www.pocketmac.net*) offers full synchronization with all Mac OS X PIM applications, plus Microsoft Entourage, Word, Excel, MP3, etc.

Infrared data transfer with Peacemaker Pro

Getting to grips with HanDBase 3

In the second part of a new series, Josephine Doran presents a beginners guide to using this powerful database application for both Palm OS and Pocket PC

In the first instalment in the last issue, we looked at the basic theory behind database programs, and used HanDBase to set up the required fields for a very basic CD listings database. In this issue, we'll examine the process of adding and manipulating entries, and look at a few of HanDBase's various field types in a little more depth.

A word about manuals

Before proceeding with the series, it's worth noting that since the last issue, DDH Software has compiled a full and up-to-date manual for HanDBase version 3, whereas previous documentation was limited to a HTML-formatted guide to the earlier version 2.75.

The new manual is available in printed format for $10 *for shipment to US addresses only,* but can be downloaded as a free 200+ page PDF file. All HanDBase users should be sure to equip themselves with a copy of this important document.

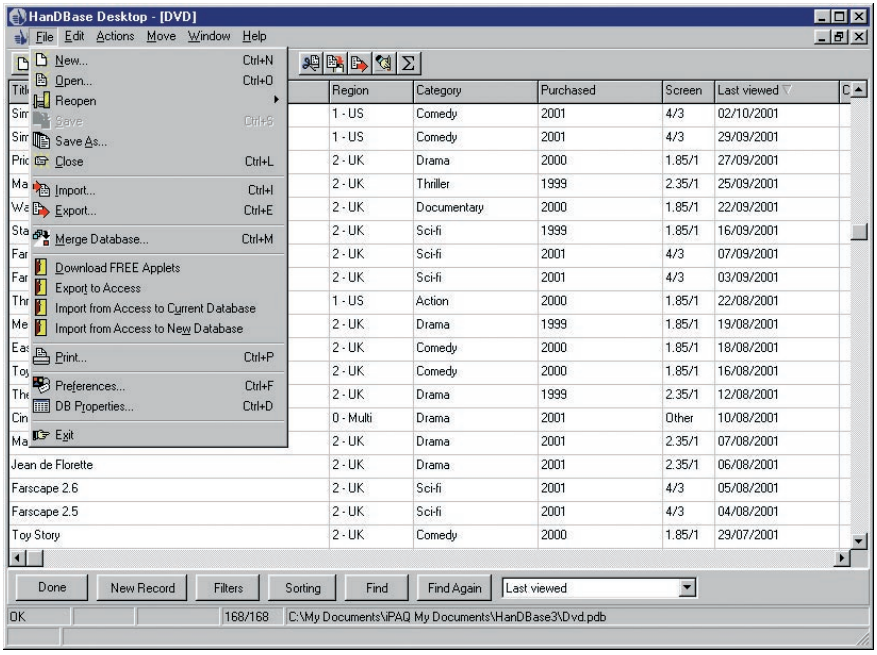
Populating your databases

If you're starting a database from scratch, you may well be happy to add each new entry directly from your handheld. In many cases, though, you'll either want to add the bulk of your entries via the companion PC-based HanDBase Desktop, or use it to import existing data from another database program (such as Microsoft Access) or spreadsheet. No matter which route you take, HanDBase Desktop will keep your handheld databases synchronized with desktop versions of each file, providing safe and current backups of every database you create. We'll look at HanDBase Desktop in more detail in a future instalment.

Working on the handheld

Going back to the example file we set up in the last issue, you should have created a copy of our simple CD database, which thus far contains no data.

Firstly, open the file by double-tapping on it from the main HanDBase screen. To enter your first database record, tap on the 'New' or blank page icon at the bottom of the screen. At this point



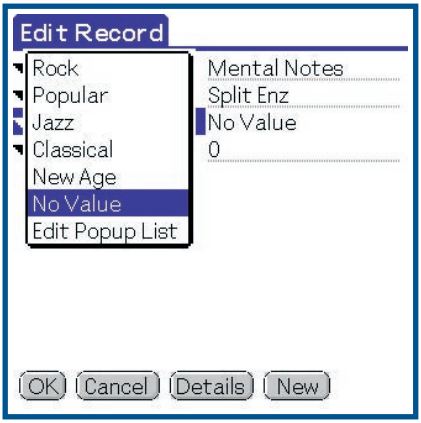
Make it easy on yourself. HanDBase Desktop makes light work of data entry and import

you'll be presented with a simple data entry screen.

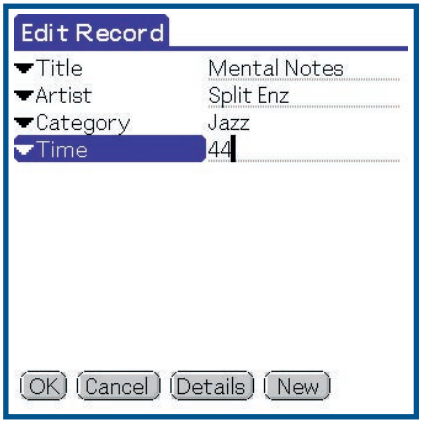
The first two fields of 'Title' and 'Artist' are simply plain text, so quite naturally it's a simple matter of entering appropriate words. Remember that we limited the length of both these fields to 40 characters each, so if you try to add more than 40, anything extra will be ignored. As mentioned last time, if at any point you wish to increase the figure, it's easy to go back into the database setup screens and amend it. Similarly, you can reduce the value if you wish, but doing so will naturally 'chop off' some of the data in records whose length exceeds the new, shortened value.

Pop-ups

The third field, 'Category', was set up as a 'Pop-up', with the contents to be selected from a pick list containing all our pre-defined entry options. To make your entry, tap on the 'Category' heading down the left of the screen or the little black triangle adjacent to it. As soon as you tap on the desired option from the pop-up box it will promptly disappear, leaving you with the corresponding text showing in the field. You'll also notice the ability to set the entry as 'No Value' if none of the available options match this particular record, or to choose 'Edit Popup List', which lets you add new options on the fly.



HanDBase running under Palm OS, showing our pop-up 'Category' field



Entering a time value into the fourth field. Note that only numbers will be accepted.

Numbers versus times

The fourth and final field, 'Time', was set up as a numeric field. Aside from allowing calculations to be made on numeric fields, setting it up in this way (rather than simply as text) helps you to 'qualify' the data you're inputting, as it will reject anything other than numbers. To demonstrate this, try entering a few letters or words into this field. As soon as you move to another field in the database, your letters will disappear, being replaced by a zero.

This field was also set to display an integer (i.e. whole number) value only, so if you try to add a fractional number such as "4.5", HanDBase will automatically remove the fractional part, leaving you with "4". If you wish to change this, go back into the database Properties screen, tap on 'Fields', select the 'Time' field and change the 'Field Type' entry from 'Integer' to 'Float'. You can then set the 'Places after decimal' option beneath it to a suitable value, in this case probably nothing larger than "1". As with the text fields, there's nothing to stop you changing their layout after the database has been created, but beware that there's the potential to irreversibly truncate your data when shortening text or reducing the number of decimal places in a numeric field.

As a general point, rather than entering times as a simple numeric value, it's also possible to use HanDBase's specific 'Time' format. It's not appropriate in this case, however, as it will only display times in the format of "12:00am" rather than a discrete number in hours/minutes/seconds.

If you want to enter your times in minutes and seconds, the quickest way is to use the existing 'Time' field to enter the 'minutes' component, and then add another identical field to show the 'seconds' portion of the time. It will still be possible to create summary fields showing total times in hours, minutes and seconds, using HanDBase's 'Calcu-

A quick jump back to the Properties screen lets you go back and change field properties

Back in list view, with our new record shown

lated' field option, which we'll look at in the next issue.

Moving on

Once you've completed your first database record, a tap on the 'OK' button will take you back to the main list view, which will eventually show all your records in a scrollable spreadsheet-like grid. Next time we'll show you how to add new views to this list to display your records in a variety of different ways. In the meantime, add a few more records to populate your database. Once you've done this, try tapping on any of the displayed headings in list view. This offers a quick way to sort the entire list in ascending or descending alphabetical order on the chosen field. Also, if you find that the default column widths are too narrow to see all the text, tap and drag the appropriate column header to the left or the right, to change its width. Finally, you can scroll from left to right using the black arrow icons at the bottom right of the screen (in the case of Palm OS) or the Pocket PC scrollbar.

EPOC Beds, Bucks, Herts User Group

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Palmtop User

Working with ListPro

Paul Nelson offers some insights into this powerful application for Palm OS and Pocket PC

There's often a considerable degree of overlap between some of the software applications we use. Quite frequently it's hard to decide whether a spreadsheet or a database program is the best tool for the job, and in many cases either will perform the task equally well. With both getting more and more sophisticated at each new release, the waters get more muddied as the years pass.

ListPro is one such do-it-all application which, despite its main brief as an enhanced shopping list manager, manages to successfully encroach on the territory of databases, spreadsheets, outliners and even project management tools.

Available for both Palm OS and Pocket PC, ListPro has enough functionality and flexibility to earn it a place on most handhelds, and is capable of much more than first meets the eye.

Lots of lists

Most of us use our handhelds to keep lots and lots of lists, ranging from things to do, through shopping lists, gifts to buy, films to watch—you name it. Unless you use some kind of list manager or outliner for this already, the chances are that you're keeping all these lists either in your handheld's default to-do list, a database format, or perhaps as a mass of individual spreadsheets.

For lists that contain no more than a few basic fields, such as an item and a date, priority or yes/no status, then a simple to-do list or spreadsheet grid is probably as good a solution as any. Where a program such as ListPro comes into its own is when you want to include several of the above, plus maybe a done/not done/in progress status, a numeric value (such as an item price), and perhaps some more detailed notes to accompany the basic entry text.

All this is getting far too clumsy for a PDA-based spreadsheet, and setting up a custom database for a list type that

A fairly simple shopping list, with checkbox and an extra 'flag' field

A slightly more ambitious list, using multi-level outlining to arrange sub-items

you may never use again in quite the same form might feel like just a little too much effort.

On hand and desk

The Palm OS and Pocket PC versions of ListPro use slightly different menu structures, and indeed there are a few functional differences, but the basic feature list is almost the same. Most importantly, both use the same file structure, so it's possible to beam or otherwise transfer lists between platforms. There's a PC desktop version of ListPro also available (at extra cost), and this provides all the features of the handheld versions, but with the benefit of the larger PC screen.

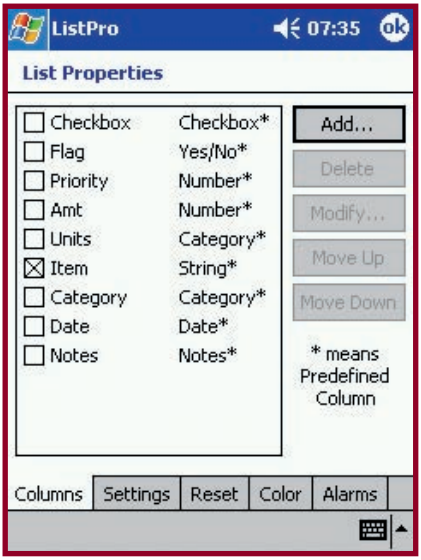
When setting up a new ListPro file, you're invited to either use one of the built-in templates (a huge number are available for free download from the ListPro web site), or configure your own from scratch. Either way, you can add or modify fields as you go along, perhaps as you expand the level of depth in your list. Lists can contain any combination of text fields, yes/no flags, pop-up category lists (using your own pre-set values), number fields, date/time fields and links to open any external document.

Flags and checkboxes

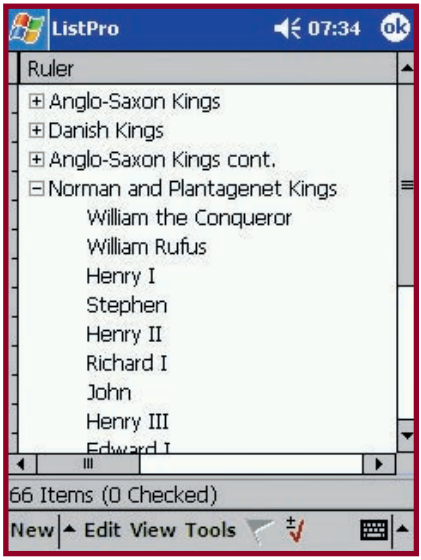
As well as traditional to-do list-style on/off checkboxes, ListPro adds the concept of 3-state 'flags'. If you want to be able to record items as, say, 'not done', 'in progress' or 'completed', you can set a suitable 3-state flag. ListPro uses a flexible system of coloured markers for these fields, so you can set coloured boxes, stars, triangles, and so on to differentiate between multiple 3-state flags in each of your lists.

Outlining

There are a number of dedicated hierarchical outliners available for both Palm OS and Pocket PC, but ListPro adds a basic outlining ability to its lists,



It's easy to add, delete and rearrange fields as you expand your list



Using ListPro's outlining facility to store a database of Kings and Queens of England

simply by indenting or 'outdenting' each item to create parent/child relationships. Using this technique, it's possible to have multi-level lists, with 'child' items hidden beneath 'parent' headings and expanded with a single tap.

I'm a spreadsheet!

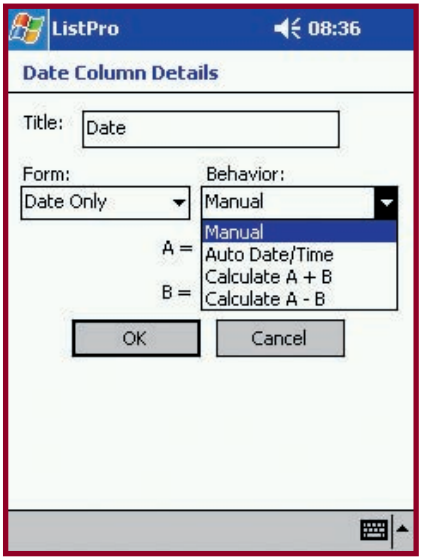
It's a fact that 90% of spreadsheets are nothing more than a list of items with a numeric value next to each one and a total at the bottom. ListPro takes advantage of this premise by keeping a running total of the values in any numeric fields, as well as showing the total number of checked items (if checkbox fields are used). Even more flexibly, the program can either total all values, or merely those for entries that have been flagged or checked.

Another spreadsheet-like feature of ListPro is that date and time fields can be calculated as well as simply entered from a pick list. You can add or subtract times and dates to work out elapsed times or remaining time, displaying the result in its own field.

Date/time fields can also have independent alarms attached, so although ListPro doesn't integrate to your built-in to-do lists in any way, you can still add reminders to ensure that you don't forget important items.

A burst of colour

To help clarify items in your lists, ListPro allows checked and/or flagged entries to be displayed with a highlighted background. Highlights can also be applied manually to any entry.



ListPro's handling of dates gives it some degree of spreadsheet functionality

A handy restaurant database, showing dates and highlighted fields

A good sort

No program that handles data fields would be complete without decent sorting and filtering capabilities, and ListPro is no exception. As well as searching for text strings either in single lists or in every ListPro file on your handheld, it's possible to filter entries to display only those containing a specified text string in either a standard text field or notes field.

Do-it-all

With such an impressive armoury of features, ListPro has the potential to take on many of the tasks that might otherwise require the purchase of three or four separate programs, and it's one of those applications that you'll find more and more uses for as you explore its capabilities. ListPro costs $20, or $30 for handheld and desktop versions together, from *www.iliumsoft.com*.

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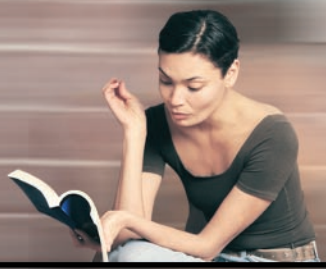


John Woodthorpe takes a regular look at the ever-expanding world of electronic books

One of the things that makes life hard for the suppliers of electronic books is deciding on the range of hardware they are going to support.

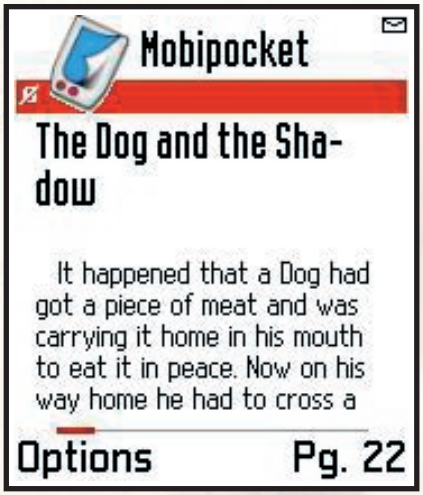
Aside from Psion, Palm OS and Pocket PC palmtops, smartphones are now becoming viable devices for reading electronic texts. Mobipocket (*www.mobipocket.com*) has reacted to these developments by creating reader software for a wider range of platforms than any other supplier. The Mobipocket web site has versions for four handheld platforms, as well as for Windows PCs. Mobipocket has offered Psion, Palm and Windows CE software for some time now, and has recently added a Pocket PC 2002 version. A version for the new SonyEricsson P800 is also due for release shortly. The Palm software covers OS versions from 3 to 5, meaning that an extensive range of machines of varying ages can run it. The most recent additions are for the Nokia 9210 and 7650 Symbian smartphones.

A book on your phone

The Nokia 7650 version of the Mobipocket Reader is quite impressive, despite the small screen of this model, though the downside is the small memory size of the phone. With less than 4MB available, even this application's modest 500K footprint has a major impact on available space, even before any books are installed. As new Symbian models appear with more realistic amounts of user memory, the problem will of course ease, and the fact that you'll probably always have your phone with you makes it even more suitable for reading books while on the move.

Mobipocket power

All the incarnations of the free Mobipocket Reader software allow plenty of configuration to change fonts, search for words, display embedded images



The Mobipocket Reader on a Nokia 7650

and do most things you'd expect from a decent reader. There's also a 'Pro' version that costs $20. As well as all the features of the standard version, this adds the ability to scroll text automatically, rotate the screen, annotate and generally configure the software more closely to your preferences.

Cross-platform

The reader will open both plain text files and standard Palm DOC files, as well as Mobipocket's own ebook format. Transferring files onto the handheld can generally be set up from the Windows version of the reader software, and completed by the normal connection software. Nokia 7650 users have to send them manually by infrared, Bluetooth or email, and the versions for other platforms will accept similar manual transfers—extremely useful if you don't use Windows or haven't got the desktop reader software installed. The same applies to downloading the reader software, in that a 'bare bones' download is available by following the Mac/Linux links if you don't want the Windows executable. Users of Pocket PC and the older WinCE machines don't get that choice, since it's assumed they will have Windows and will only want to install the reader software from a PC.

It takes a little while to get used to the non-standard menus on the Palm and Pocket PC versions, but the Psion version follows the normal conventions for the platform. All versions have a pleasing appearance and are very easy to use, although strangely the Pocket PC version doesn't currently support ClearType anti-aliased fonts, and doesn't respond to 'global' ClearType utilities (see page 120).

Of course the reader software is only part of the point of Mobipocket, with a range of books available for purchase and download from the site. They include the normal science fiction, horror and romance categories, along with reference texts, dictionaries, geography, science, computing, and many others. There are free samples available for most titles, and the prices are generally very reasonable. Many books contain hyperlinks to allow jumping from contents lists, embedded images, etc.

Sensible security

In common with several other commercial sites, purchased books are linked to a specific device, to help prevent illegal copying. This is done by creating an account and registering the Personal ID that the reader generates. Up to two 'PID's can be used, allowing books to be read on two machines (e.g. desktop and palmtop). Fortunately, you can change the PIDs if you replace one of those machines and then download the books again free-of-charge. This appears a fairly sensible way of dealing with things, since it's clear that suppliers have to use some form of copy protection for their products, at the same time taking care not to make life too complicated for customers, many of whom change their hardware quite frequently.

All in all, Mobipocket provides an excellent multi-platform solution for anyone wanting to choose from a wide range of high quality texts on their palmtop or Windows desktop.

On the NET

by Pete Sipple

Our regular look at what's happening online and where to point your browser

Software at Tucows

The applications built-into our handheld devices do an excellent job of managing our address books, checking messages and making sure we don't miss important appointments, but experimenting with new software is what really brings a PDA to life, allowing you to use the machine *your* way, and make it do what you want. So, where do you find the right piece of software? Judging by the feedback we've received in our recent online survey, the answer is **Tucows**. There are popular software sites dedicated to specific operating systems, such as PalmGear and PocketGear, but Tucows comes top of the poll due to its cross-platform policy, handling downloads for Palm OS, Pocket PC and Symbian OS, as well as Blackberry and Newton devices.

To find software, you select your machine type then browse through the available categories. You're then presented with a list of programs, complete with file sizes, software type (freeware, demo, shareware or commercial), and a 'cow' rating. Ratings are not based on the number of downloads, as with other download sites (unfortunately, download information isn't provided), but are awarded based on documentation, support, quality, ease of use, features and software design. Program listings carry additional information, such as

prices, links to the author's web site and screenshots, as well as the actual download link.

The Tucows site contains several other goodies, such as 'Program of the week', listings of the latest software releases, plus newsletters and Frequently Asked Questions for each machine type. There's also a powerful 'supersearch', to help you track down the application you're looking for.

If you happen to be a program author, you can register at the Author Resource Centre, for access to your program listings and to release new versions of your products.

The site has a large collection of software (although there are larger ones out there), and the careful vetting/reviewing process helps to ensure that the site doesn't contain 'dead' links or poor software.

pda.tucows.com

Recent sightings

Formerly known as Cliéworld, the UK-based **CliéPlanet** is packed with useful content, including a very busy news section, a forum where Sony Clié owners can get talking, an interviews section, information on which applications support 'hi-res' mode and Palm OS 5, plus software and hardware reviews. A mobile version of the site that can be used with AvantGo and iSilo is available, you can sign up to an email newsletter, and the weekly competition should keep you coming back. You can also download wallpapers and skins to customize your device, and email your problems to SynchronizedQueen, Clié Planet's resident PDA agony aunt! If you're a Clié owner, this should be your premier site, and there's something for non-Clié Palm OS owners too.

www.clieplanet.com

It's not often that we report on a site before it's launched, but in this case we'll make an exception. The Series 60-powered Nokia 3650, with its unique dial-shaped keypad, is due for launch in the early part of this year, and **Nokia3650.com** looks set to become *the* resource for this new smartphone. As well as promising the normal site content: news, reviews and downloads, the site will also reportedly be offering WAP access to its content (including ring tones), plus photo and file storage space. To get the ball rolling, the discussion forum is already live and is already up to 1000 posts—not bad considering that both the site and the phone are "coming soon".

www.nokia3650.com

Five-alive has a mission, to act as a portal for PDA users who want to access Internet content on the move. It contains links to over 200 PDA-friendly sites that can be viewed on smaller screens. Content is aimed at Palm, Pocket PC, Psion and Nokia smartphones. The most useful part of the service is that you can create your own 'My five-alive' area, where you pick your preferred sites then log-in for your personalised service.

Hints & Tips

Submit your hints and tips—every published entry wins TWO free issues added to your subscription!

SD speed issues

Palm OS

When using a third-party launcher on my Palm m505, I've noticed that it slows down hugely when I put in my (fairly full) 128MB SD memory card. As installing new programs isn't something I do every day, I disable the launcher's 'Auto-scan', giving me far faster access to my applications. In addition, the only files I put in the standard /Palm/Launcher folder are those that I need access to every day. DOC files, images and seldom-used programs are put in another folder outside of '/Palm'. When needed, I use MSMount (free from *www.palmgear.com*) to load this folder and make it appear.

David Webb, Dallas, Texas, USA

Keep your SD card Launcher folder as lean as possible

Ultimate Cli ergonomics

Palm OS

If you own a Sony Clié NR70V or NX70V, here's a handy tip when using the delayed capture feature on the camera. Put your Clié in 'tablet' mode with the ends slightly open. This will form an inverted V-shape which will allow you to place the Clié on a stable surface while you go and pose for the camera—in effect, forming a built-in tripod. Also, because the screen is facing you, you can then frame the photo perfectly.

This setup is also handy if you use your Clié as an alarm clock, or if you have the PhotoStand program running and your cradle is not to hand.

Sunny Ng, London

Memory Stick speed-up

Palm OS

Again on the Sony Clié handhelds, installing large files onto a Memory Stick can be speeded up enormously by using the MS Import application supplied by Sony. This automatically connects your Clié to a PC, allowing it to read and write files on the Memory Stick directly as an additional disk drive. Multi-megabyte files will now only take seconds to install, as opposed to many minutes using standard HotSync.

Sunny Ng, London

Don't forget cut & paste

Palm OS

The simplest solutions are often the best. In the PC Palm Desktop, you'll sometimes find yourself having to reassign multiple entries to a different category, perhaps as a result of an import into 'Unfiled' by mistake. Don't forget that the humble cut-and-paste works perfectly: just highlight the entries you want to reassign or move, cut them to the clipboard, move to the destination category and paste away.

Keith Manners, Toronto, CANADA

Partial blackout

All handhelds

Anyone else familiar with the Palm m130 (or Palm IIIc, Handspring or any other handheld with a similar colour screen) will know all about the screen 'blacking out' in bright sunlight. There is a trick to still being able to read the screen in these circumstances—simply angle the unit so that it's facing straight into the sun, at which point you'll be able to see the LCD pixels again. It's not perfect, but at least you can see what you're doing.

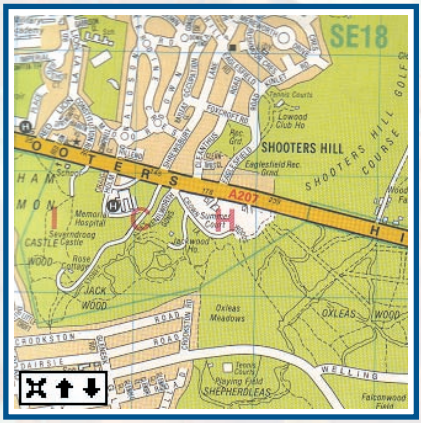
Patrick Stevens, Aldershot, Hampshire

Easy electronic maps

All handhelds

For quick and simple electronic maps for your personal use, perhaps for showing friends where to meet up or for planning outings, you can always scan in your existing paper map using a suitable desktop scanner, then scrolling around it on your handheld in a suitable image viewer program. Be careful to use software that lets you view images at a 1:1 zoom level, or you many find that map text gets downsampled and becomes illegible.

Neal Devonshire, Croydon, Surrey



Hardly state-of-the-art, but scanned in maps can have their uses...

Macro5 for the Revo?

Psion

You have mentioned before that the popular Macro5 utility cannot be used with the Psion Revo. However, there is now a Macro called 'Shortcuts' (*www.psionwelt.de/MarioCollado*) which provides shortcut bars to suit EPOC palmtops other than the Series 5 range. To get it to work, simply install Macro5 as usual, but then assign one of the visible slots to 'Shortcuts'. The hotkeys to Macro5's own shortcut bars are then disabled, and new ones assigned to open the 'Shortcuts' versions. The system works perfectly on my wife's Revo, and the Series7/netBook version even supports colour.

Andy Mitchell, Bebington, Merseyside

Keeping things simple

Psion

If you find yourself using only a single Jotter or Agenda file, why not cut them from your C:\Documents folder and paste them into C:\System\Data instead? Tap on each in its new location to update the application's '.ini' file, to stop new documents being created in C:\Documents again.

This scheme both tidies up C:\Documents a little and, more importantly, means that by just backing up the C:\System\Data folder to CF disk from time to time, you'll have backed up your Contacts data file as well, which resides in the same folder.

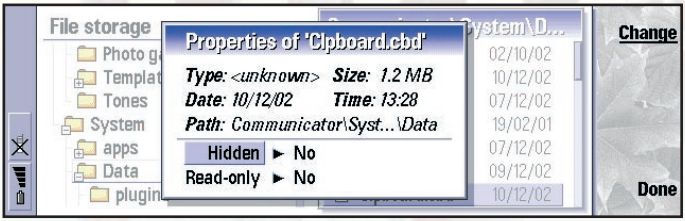
Simon Long, Cambridge

Nokia quickies

Nokia 92xx

As an ex-Psion Revo and new Nokia 9210 user, hopefully these observations and quick tips will help others making the change:

- Get yourself a decently-sized MMC disk (your 'D' disk—48MB should be considered a minimum) and restore/install everything to this, leaving the critical 4MB of internal memory (your 'C' disk) as free as possible. Be careful what you keep in the clipboard. Copying and pasting an image into the Word processor can easily consume a couple of megabytes, so make sure you copy something smaller (such as a few words of text) immediately afterwards to purge the space previously taken by the image.
- In most applications, although not marked as such on the keyboard, you can use [Chr] plus the 'Arrows' controller for the common functions of 'Page Up', 'Page Down', 'Home' and 'End'.
- Be aware that when you turn off the 'command buttons' (down the right edge of the screen) in some applications to see more of your document, you can also lose important functions. For example, 'Close' in Word and 'Bookmarks' in Web are *only* available through the command buttons.
- Don't forget to explore the CD that comes with the 9210. SIS installation files for useful extra applications and utilities (such as Spell and a Jotter-clone) are scattered around the disk.



If you value your Nokia 9210's memory, watch what you copy to the clipboard!

- The 9210 has many multi-tab dialogs. The quickest way to switch between tabs is simply to tap the [Menu] key.
- You can save time in Calendar by pressing its application button repeatedly to cycle between the different views.

Brenda Martin, Liverpool

Call recording

Nokia 92xx

How many times have you made an important telephone call and wished you had the facility to record the pledges the other party was making? While a call is in progress on a Nokia 9210 Communicator, a 'Record' command appears on the menu. Occasional bleeps are inserted to alert the other person that you're recording the call, so this is not for covert purposes, but for calls to insurance companies, banks, etc., where it can be very useful to have a record of the conversation. Note that it's best to save recordings of any significant length to your MMC disk, to avoid cluttering up your 'C' disk.

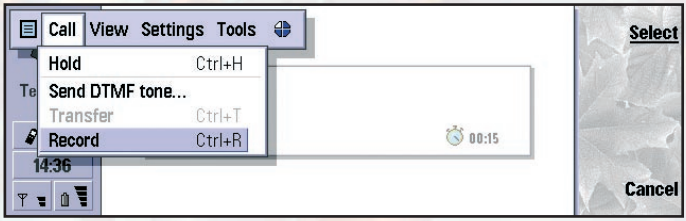
Andrew Dunkley, Swindon, Wiltshire

Formatting frustrations

Pocket PC

Those of you who use your time out of the office to check the content and layout of word-processed documents will have noticed that tables, drawings and most other formatting disappears when you transfer a Microsoft Word document from the desktop computer to the Pocket PC. To many people, the inability to retain original formatting defeats the object of having a word processor, and this makes Pocket Word virtually redundant for some users.

So why does this happen? When you transfer Microsoft Word files to your Pocket PC, they are converted to 'Pocket' versions of the program. Unfortunately, Pocket Word is unable to deal with



About to record an important call on the Nokia 9210

much of the advanced formatting, so it is simply lost during the transfer and synchronization process, leaving you with little more than body text with the bold, italic and underline formats.

There is no way to prevent this behaviour, but there is now a comprehensive third-party word processor available for Pocket PC and Handheld PC devices. TextMaker (see review on page 44 - Ed.) has most of the features normally found in desktop word processing packages, and lets me open and save documents in a range of formats. It supports bullets, borders and shading, and I've even inserted drawings, images and tables into my documents.

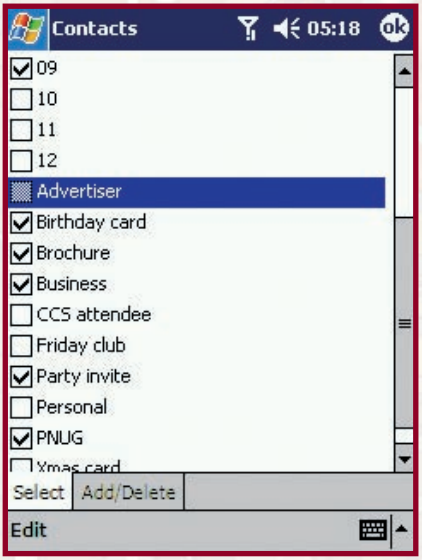
Henri Chantal, Aix-en-Provence, FRANCE

Flexible categories

Pocket PC

I used to own a Palm OS handheld, and didn't find the Address Book 'Categories' feature very useful, as each contact could only be assigned to a single category. Thus, if somebody was a member of both the 'Friends' and 'Office' categories, I was forced to categorise them as one or the other—never both.

With Pocket PCs it's possible to assign each person in your Contacts database to as many categories as you like. As there seems to be no practical limit to the number of categories you can add, I use them to create all manner of reminders. As an example, I use categories of '01', '02', '03'... up to '12', to remind me of the next time I should make routine contact with business clients, with '01' corresponding to January, '02' to February,



Contacts can be in more than one category...

and so on. It's then a simple matter to set the Contacts list view to show all the outstanding calls for the current month. Similarly, I use categories to flag everyone I need to send Christmas/birthday cards to, etc.

Hans Pfell, Zürich, SWITZERLAND

Pocket PC video

Pocket PC

Pocket PC 2002's built-in Windows Media Player can play WMV video clips, but can't handle the more common MPEG format. I use the excellent PocketTV MPEG Movie Player (*www.pocketty.com*), which is free if purely for personal use.

Karen Bowles, Cincinnati, Ohio, USA

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Alternative operating system?

Palm OS

Q Can I run other operating systems on my Palm m505, either now or in the future?

Richard Bradley, Ealing, London

A Not easily. With a little knowledge it's possible to get a rudimentary version of Linux up and running, but the process is fairly involved. With the m505 you're limited to 4.x versions of Palm OS, as 5.0 and later all require a special ARM processor. Do look out for incremental upgrades (4.1, 4.2, etc.) from Palm though, which can all be 'flashed' into your handheld to replace the original version.

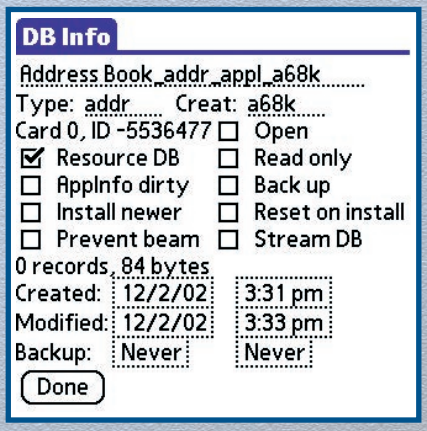
The 68k dollar question

Palm OS

Q I consider myself a fairly advanced Palm OS user and I like to know how things work. Using a file browsing utility, I notice that the memory in my Palm Tungsten T is littered with little databases ending in '_a68k'. I've never seen these on previous Palms I've owned—what are they, and can I get rid of them?

Cliff Alexander, Chicago, Illinois, USA

A All the little '_a68k' files should be left well alone. If you check their details, you'll find that they're all of negligible size. Essentially, they're temporary stores that get used by Palm OS 5 and the ARM processor in your Tungsten, whenever you



A typical '_a68k' file, as used by Palm OS 5 on the Palm Tungsten T—only 84 bytes each

run an application that was compiled for the earlier Motorola Dragonball 68000 series processors. In reality, this is almost every current application, including most of the Palm OS built-in programs. To ensure compatibility with as many handhelds as possible, most applications are built for the Dragonball but tested with Palm OS 5 as well.

While each program is being run, all of its Dragonball-oriented resources (forms, temporary data, etc.) are quickly converted by Palm OS 5 into ARM versions and kept in the '_a68k' files. When the program closes down (i.e. you switch away to something else), the files are emptied again.

New Year fireworks

Palm OS

Q On New Year's Day I was greeted by a brief fireworks animation when opening up my Palm handheld. Is this a known 'Easter Egg'?

Ian McAllen, Droitwich, West Midlands

A No, but we'll take an educated guess that you had the ever-popular Big Clock utility (*www.bigclock.de*) running, which does include a fireworks animation at the start of each New Year.

USB troubles

Palm OS / all USB handhelds

Q Having just upgraded from a Palm Vx, I charged up my new m515, installed the latest Palm Desktop on my (IBM) PC and plugged in the m505 cradle's USB connector. I clicked on HotSync Manager and made sure that only 'Local USB' was checked, but there was nothing showing up in Device Manager and nothing happened when I pressed the cradle HotSync button. In the meantime, I'm HotSyncing to my wife's laptop, on which the same setup works perfectly. Any suggestions?

David Crane, MALTA

A Firstly, note that USB cradles for Palm OS handhelds *aren't* USB devices, they are just cable adaptors for the handhelds themselves, which *are* genuine USB devices. So without a handheld in the cradle actively HotSyncing, there'll be nothing to show up in Device Manager most of the time.

However, a HotSync should obviously work every time, and we'll take an educated guess that your IBM-branded PC is more than four years old. Older IBM PCs had a bad reputation for USB connectivity, and you'll probably need a USB expansion card and a BIOS update if this desktop is to HotSync successfully.

SIM synch

Palm OS / Psion

Q I have a standalone mobile phone and am trying to beam the contents of its phone directory to my Palm handheld. Is this possible, or do I need to re-enter everything manually?

David Jones, Egham, Surrey

A The SIM cards of most GSM mobile phones can be synchronized to Address Book using

PhoneMan lets you manage a phone SIM card from a handheld computer

the third party PhoneMan utility (*www.zenobyte.com*). Psion users should note that PhoneMan is also available for EPOC, with even more features.

The Psion 5mx 'Pro'

Psion

Q A contact of mine is selling a Psion Series 5mx 'Pro', with more memory than the standard 5mx. I'd never heard of a 'Pro'—is it a new model from Psion after all this time?

Mrs J Keely, Sydney, AUSTRALIA

A Alas, no. The 5mx Pro was in fact introduced earlier than the normal Series 5mx, for non-English markets that were thought to need more flexibility in selecting and booting the EPOC operating system. The most common, the German version, featured 24MB of memory but no ROM chip, with EPOC having to be loaded from CF disk every time the Psion was given a hard reset, much like the more recent netBook.

Although a good idea in theory, the user actually ended up with less available memory than on a standard Series 5mx, as the operating system took up well over 10MB. And to our knowledge, no operating system upgrades ever materialised to take advantage of the Pro's unique feature.

Although an English version was never formally released, dealers and repair centres occasionally make them available, sometimes as rebuilds from Psion spares. See, for example, POS Ltd, at *www.posltd.com*.

Psion to Nokia?

Psion / Nokia 92xx

Q Looking ahead to when my Psion Series 5mx finally bites the dust, I'm tempted by the Nokia 9210 communicator, but worried about reports that it doesn't synchronize well with Microsoft Outlook, and that it's a bit of a 'brick' to carry around. Do you have any recommendations?

Deborah Swains, Truro, Cornwall

A Psion's PsiWin and the Nokia PC Suite are internally fairly similar. From the cases we've seen, if your Series 5mx currently synchronizes properly with your desktop PC then Nokia Suite should behave equally well. Psion users with problems have generally still had problems after switching to the Nokia 9210.

Don't worry too much about the reported bulk of the 9210. Yes, it's

positively huge compared to typical mobile phones, but it's still smaller than a Series 5, and of course has a colour screen and built-in phone/modem. Perhaps the biggest downside is the Psion Series 3-style keyboard. If you can live with this, then the 9210 generally makes a good upgrade.

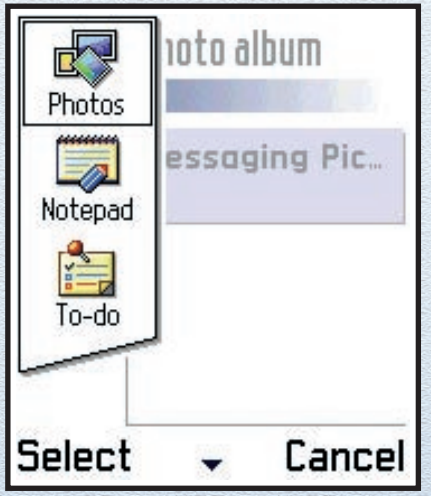
Nokia firmware

Nokia 92xx

Q My Nokia 9210 is now over a year old and I'm wondering what I'd gain by sending it in to a service centre to have its 'firmware' upgraded?

Diane Kendrick, Grimsby

A A computer or smartphone's 'firmware' is essentially the operating system in a special reprogrammable chip. In the case of the Nokia 9210, you can find out what version you're on by using 'Control panel | About product', or by entering '*#0000#' on the phone front panel. You should aim to be using v3.62 or v4.13, both of which are quite stable. If your version is earlier than 3.62 then you will experience smoother operation and fewer crashes if you get the upgrade done.



Browsing the list of running applications on a Nokia 7650

Multi-tasking on the 7650

Nokia 7650

Q I know that the Symbian operating system as used on my Nokia 7650 is supposed to be multi-tasking. How can I see which programs are running?

Lee Trent, Brentwood

A Hold down the Menu button and a window will pop up, showing all currently running applications. Move up or down the list and use 'Select' or [Enter] to switch to an application, or press [C] to cancel (terminate) it instead.

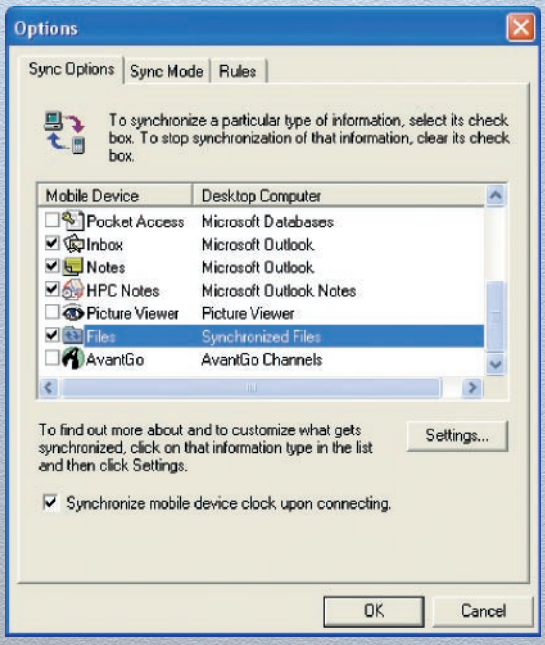
Excel/Word synchronization?

Pocket PC

Q I spend much of my day away from the office, so I bought a Pocket PC last month so that I can take my Microsoft Word and Excel documents with me while on the road. I am struggling to find the easiest way to do this, and am presently using the Explore command on ActiveSync's toolbar to navigate to the 'My Documents' folder on my Pocket PC. I then drag and drop my files from the desktop into this folder. However, I was wondering if there is a quicker way to synchronize my documents?

Juan Valero, Barcelona, SPAIN

A Yes, ActiveSync makes it easy for you to synchronize your Word and Excel documents between the desktop computer and Pocket PC. Simply copy/cut and paste the document that you want to take with you into the Pocket PC's 'My Documents' folder that you'll see on your desktop. The next time you cradle your Pocket PC and use ActiveSync to synchronize your Calendar, Contacts and Tasks, your documents will automatically be converted to Pocket Word or Pocket Excel format and transferred to your Pocket PC. Note that to allow this to work, you must first instruct ActiveSync to synchronize your files. To do so, open ActiveSync on your PC, tap on the 'Options' icon and ensure that the box next to 'Files' is checked in the Sync Options tab.



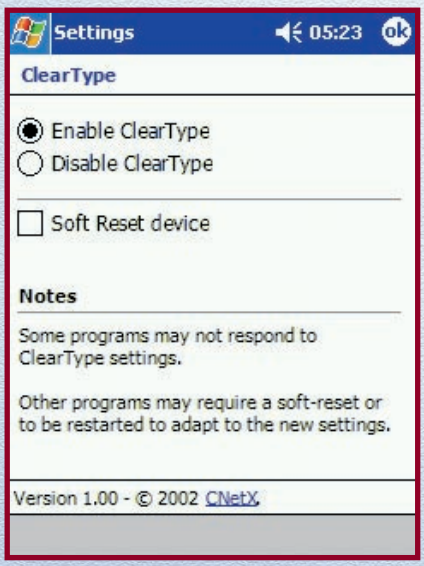
Be sure to check the appropriate box to synchronize files

Missing ClearType

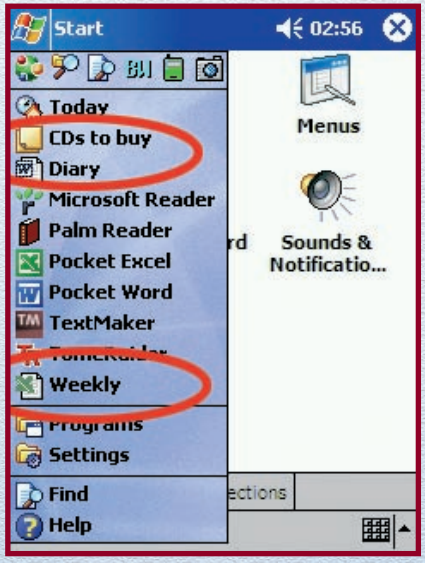
Pocket PC

Q I used to own a Toshiba e570 Pocket PC, which used nice, anti-aliased 'ClearType' fonts in virtually all applications. I've since upgraded to a Compaq iPAQ 3950, which only seems to use ClearType in a few applications, such as Microsoft Reader. Am I missing something, or was this just a feature of the Toshiba?

Brian Dillon, Caracas, VENEZUELA



A handy ClearType utility



Add files to the Start menu as well as programs

A Some Pocket PCs have a built-in ClearType utility that works globally, whereas others do not. If you don't have the facility as standard, download a copy of the freeware ClearType Applet (*www.cnetx.com*), which works for the majority of applications, with the notable exceptions of Pocket Excel and Pocket Explorer. Note that some applications have their own menu option to enable/disable ClearType, and this will always override any global settings.

Files in my Start menu?

Pocket PC

Q Although the Pocket PC 'Start' menu offers a quick and easy way to launch my most frequently-used applications, I'd really like to find a quicker way to launch specific *files* as well. For example, I keep a daily diary in Pocket Word, and would dearly love a way to access that from the Start menu.

David Shoenburg, Oslo, NORWAY

A Although not widely documented, it's possible to populate the Start menu with shortcuts to specific files (and even folders) as well as applications. It's only necessary to add a suitable link ('.lnk' file) into the 'My Device/Windows/Start Menu' folder. These files/folders can then be accessed with a single tap.

Most good third party file manager programs have a facility to create such shortcuts, including the freeware PocketExplorer (*www.citadeldevelopment.com*), PE File Explorer, (*www.vieka.com*) or Resco Explorer 2003 (see page 18).

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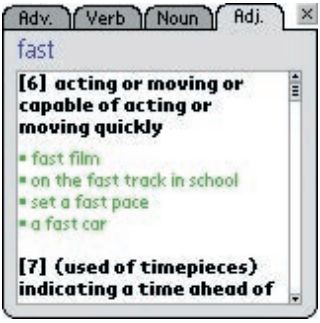

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- More hardware on test, including new PDAs from Palm, Sony, Nokia, SonyEricsson, Dell, HP/Compaq, PocketGear and Sharp
- Have database, will travel. We look at the best database programs for all handheld platforms
- Input update - following Palm's recent switch to Graffiti 2, we compare text input options for all PDA platforms
- Life on the move. Travel tips for the PDA road warrior
- Printing from your handheld. We look at the various options available for all platforms
- Sound and vision. Video and audio playback on your PDA
- Voice control for your handheld. We look at the current state of play and some new technologies
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